Fishery Management Report No. 07-15

2005 Chignik Management Area Annual Management Report

By

Mark A. Stichert

April 2007

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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ABSTRACT

This report summarizes the 2005 commercial Pacific herring *Clupea pallasi* and Pacific salmon *Oncorhynchus sp.* fisheries within the Chignik Management Area (CMA; Area L). The CMA encompasses all State of Alaska coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point. There was no commercial herring fishery in the CMA in 2005. All five species of Pacific salmon were commercially harvested in the CMA: Chinook *O. tschawytscha,* sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha,* and chum *O. keta* salmon. In 2005, the Chinook salmon escapement of 6,486 to the Chignik River was well above average, exceeding the escapement goal range of 1,300 to 2,700 fish. The total sockeye salmon escapement for the Chignik River watershed in 2005 was 580,457 fish. The early-run sockeye salmon escapement of 355,091 met the early-run escapement goal range of 350,000 to 400,000 fish. The late-run sockeye escapement of 225,366 also met the late-run escapement goal range of 200,000 to 250,000 fish. Both sockeye salmon runs were below recent 5-, 10-, and 20-year escapement averages. A total of 76 Chignik Commercial Fisheries Entry Commission (CFEC) permit holders chose to join the cooperative fleet in 2005, while 23 permit holders fished competitively. The majority of the fishing effort in the 2005 season was by the cooperative fleet and occurred in the Chignik Bay District. The 2005 total (including department test fishery harvests and fish retained as home pack) CMA sockeye salmon harvest of 1,152,133 fish was less than recent 5-, 10-, and 20-year average harvests. The cooperative fleet harvested a total of 782,206 sockeye salmon, or 68.4% (allocation = 68.4%) of the CMA sockeye salmon harvest. The competitive fleet harvested a total of 362,851 sockeye salmon, or 31.6% (allocation = 31.6%) of the CMA sockeye salmon harvest.

Key words: Chignik Management Area (CMA), salmon, herring, Alaska Board of Fisheries (BOF), 2005 commercial fisheries management, harvest statistics, escapement statistics, Chignik cooperative salmon fishery.

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) manages all Pacific herring *Clupea pallasi* and commercial salmon *Oncorhynchus sp.* fisheries within the Chignik Management Area (CMA; Area L). The CMA encompasses all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point (Figure 1). For management purposes, these waters are divided from east to west into five fishing districts: Eastern, Central, Chignik Bay, Western, and Perryville districts. Each district is further broken down into sections and statistical reporting areas (Figure 2).

The ADF&G manages all CMA commercial salmon resources by emergency order (EO) based on inseason evaluation of local stock abundance and escapement objectives. Five species of Pacific salmon are commercially harvested in the CMA: Chinook *Oncorhynchus tschawytscha*, sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum *O. keta* salmon. Of these, sockeye salmon are the primary species targeted and the most important commercial and subsistence salmon species. The majority of fishing effort is concentrated on salmon returning to the Chignik River watershed. Commercial salmon fishing is the economic mainstay for five villages: Chignik Bay (Anchorage Bay), Chignik Lagoon, Chignik Lake, Perryville, and Ivanof Bay (Figure 1). The majority of salmon harvested in the CMA are delivered to shore-based processing facilities located near the village of Chignik Bay.

Traditionally, CMA salmon resources have been commercially harvested under a competitive fishery scenario. However, in 2002, a cooperative salmon fishery was proposed in addition to the competitive fishery by several Chignik fishermen and was subsequently adopted into regulation by the Alaska Board of Fisheries (BOF). Proponents of the cooperative fishery maintained that a cooperative-style fishery would reduce overhead, increase product quality, and allow commercial salmon fishermen to compete in a global market.

This report provides a summary of commercial herring and salmon management plans, fishing activity, harvests, and escapements in the CMA. This report also provides a chronology of significant regulatory changes that influenced the 2005 commercial salmon season. Most tables in this report have been verified against the Westward Region electronic fish ticket and escapement databases which contain historical data from 1970 to the present. The salmon harvest estimates reported in this document were summarized from the fish ticket database on December 18, 2006. Data published in this report supersede any data previously published.

COMMERCIAL HERRING

HERRING MANAGEMENT OVERVIEW

Herring may be harvested in the CMA from April 15 through June 30 (sac roe season) and from August 15 through February 28 (food and bait season), although specific commercial herring fishing periods and areas are allowed only by emergency order (5 AAC 27.560). Herring may be taken only by purse seines not more than 1,000 meshes in depth and 100 fathoms in length (5 AAC 27.575).

There are several distinct fishing grounds within the CMA where herring are managed as separate stocks (Table 1). Each individual area is managed on a maximum exploitation rate of 20%, given that a threshold biomass is available for harvest. Threshold biomass levels are determined prior to the fishing season after aerial survey estimates are conducted and potential effort levels are determined.

Historical Data

Commercial herring harvests were not recorded in the CMA until 1980 (Nicholson et al. 1980). In years that harvests occurred, herring harvests ranged from a minimum of 6 tons in 1996 to a maximum of 587 tons in 1980 (Table 2). The last commercial herring harvest in the CMA occurred in 1996 (Table 2; Bouwens and Poetter 2006). Recently there has been no interest in herring fishing in the CMA due to poor market conditions and the CMA herring biomass has not been systematically surveyed by the ADF&G since 1996.

2005 Herring Fishery

There was no 2005 herring fishery in the CMA; no guideline harvest levels were set due to the lack of industry interest.

COMMERCIAL SALMON

OVERVIEW OF MANAGEMENT PLANS

The 2005 Chignik commercial salmon fishery was managed based on two management plans: the Chignik Salmon Management Plan (5 AAC 15.357), and the Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan (5 AAC 15.358). Sockeye salmon bound for the Chignik watershed were also allocated under two additional management plans: the Cape Igvak Salmon Management Plan (5 AAC 18.360) in the Kodiak Management Area (Area K), and the Southeastern District Mainland (SEDM) Salmon Management Plan (5 AAC 09.360) in the Alaska Peninsula Management Area (Area M).

Chignik Salmon Management Plan

The Chignik Salmon Management Plan (5 AAC 15.357) was originally adopted in 1999. The goal of this plan was to allow traditional salmon fisheries in the CMA while achieving the sustainable escapement goals (SEGs) for both early-run (Black Lake), and late-run (Chignik Lake) Chignik River watershed sockeye salmon. Purse seines and hand purse seines were the only legal commercial salmon fishing gear within the CMA. Legal seine gear ranged from 100 to 125 fathoms in length in the Chignik Bay District and from 100 to 225 fathoms in length in all other districts. The management plan was organized into districts or groups of districts: the Chignik Bay and Central districts, the Eastern District, and the Western and Perryville districts.

Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan

The Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan, (5 AAC 15.359) was adopted in the spring of 2002, and amended in 2002, 2003, and 2004. It was repealed in the spring of 2005, and an amended emergency plan (5 AAC 15.358, 2005) was adopted by the BOF in the spring of 2005. This plan expired at the end of the 2005 salmon season. The purpose of this management plan was to establish the criteria and management measures for the CMA cooperative salmon fishery.

Conditions Required to Form a Cooperative

At least 51 Chignik Area Commercial Fisheries Entry Commission (CFEC) permit holders must have applied, together, to the commissioner of ADF&G by March 1 of every year to fish as a cooperative. Other Chignik CFEC permit holders were given until March 15 of each year to join this cooperative group. Those who elected to join the cooperative after the March 1 deadline were, by regulation, given the same terms as those who applied prior to March 1. All CFEC permit holders that elected to join the cooperative were only allowed to participate in the Chignik cooperative fishery, and could not participate in any other salmon fishery statewide from June 1 to August 31.

Allocation Criteria

In 2002, the BOF determined that an allocation between the cooperative and competitive fleets was necessary for the cooperative fishery to achieve their goals of reducing overhead expenses associated with commercial fishing and increasing product quality. The BOF originally set the criteria to calculate the allocation based on the number of CFEC permit holders that joined the cooperative (Bouwens and Poetter 2006). However, these criteria were modified in 2003 by the BOF such that Chignik Area CFEC permit holders were allocated by fleet, a percentage of the annual Chignik Area commercial sockeye salmon harvestable surplus using the following three criteria:

1) If participation in the cooperative is less than 80 percent of the registered Chignik Area CFEC purse seine permit holders, the allocation to the annual cooperative fishery will be nine-tenths of one percent of the harvestable surplus for each participant in the cooperative,

2) If participation in the cooperative is 80 percent but less than 85 percent of the registered Chignik Area CFEC purse seine permit holders, the allocation to the annual cooperative fishery will be ninety-five hundredths of one percent of the harvestable surplus for each participant in the cooperative, and,

3) If participation in the cooperative is 85 percent or more of the registered Chignik Area CFEC purse seine permit holders, the allocation to the annual cooperative fishery will be one prorated share of the harvestable surplus for each participant in the cooperative.

Management of Allocation

The Chignik Area Cooperative Purse Seine Fishery Management Plan gave the department the mandate of managing the fishery such that the two fleets (cooperative and competitive) achieved their sockeye salmon harvest allocation as closely as possible. It was noted, however, that the allocation was secondary in importance to achieving escapement and harvest objectives.

Generally, the early sockeye salmon run builds quickly. Thus, the cooperative management plan removed the escapement and lagoon buildup criteria used in the past for opening the initial fishery in the Chignik Bay and Central districts because there was concern that the harvesting power of the smaller fleets might not be able to stop a large run. Instead, the commercial fishery was opened after June 1 (after achieving interim escapement objectives) with the goal of preventing a large escapement and buildup of salmon in the lagoon early in the season.

Another condition of the cooperative fishery management plan gave ADF&G the ability to impose harvest limits. Because the cooperative fleet acted as one stakeholder, the department could impose limits on that fleet to ensure escapement needs were being met while allowing harvest of excess sockeye salmon. This allowed for harvests in times that, under a competitive fishery scenario, the fishery would have been closed.

Commissioner's Permits

The ADF&G was given authority by the BOF to draft commissioner's permits regarding aspects of the cooperative fishery not addressed in regulation. This action gave the ADF&G and stakeholders time and flexibility to resolve these issues adequately. In total, three commissioner's permits were issued in 2005 (Appendices A1 to A3).

The first commissioner's permit was in accordance with the newly adopted emergency Chignik Area Cooperative Purse Seine Management Plan (5 ACC 15.358, 2005). This permit required all Chignik Management Area CFEC permits holders who intended to participate in the 2005 cooperative fishery to first apply for a permit issued by the commissioner or commissioner's designee (Appendix A1).

The second commissioner's permit allowed the cooperative fleet to use fixed-leads in the Pillar Rock area located upstream from the traditional upper closed-water markers in Chignik Lagoon (Appendix A2; Figure 3). The leads acted to concentrate returning sockeye salmon and allowed the cooperative fleet to increase their harvesting efficiency at a relatively low cost. The ADF&G also used the provisions of this permit to more effectively manage the fishery. For example, the cooperative fleet was required to use the leads to increase harvest (offset the limited harvest capacity of the fleet) when sockeye salmon escapements exceeded interim objectives. Conversely, the ADF&G required the cooperative fleet to either tie the leads up to the cork lines, or to remove the leads from the water entirely when escapements were below interim objectives.

The third commissioner's permit allowed the cooperative fleet and the processors to hold live fish in net pens for up to three days pending processing (Appendix A3). Holding live fish was a key component in the cooperative fleet's strategy to increase product quality.

November 2004 Alaska Board of Fisheries Meeting

The Alaska Board of Fisheries (BOF) met in November 2004 to review the third season under the Chignik Cooperative Purse Seine Salmon Fishery Management Plan (Bouwens 2004). The BOF also addressed 14 proposals specific to the cooperative management plan, and several additional proposals concerning the Chignik Salmon Management Plan and Chignik area subsistence salmon regulations that had to do, at least in part, with cooperative issues.

Of the subsistence related proposals, the BOF modified the Chignik area subsistence finfish fishing regulations (5 AAC 01.485) to allow commercial salmon fishing license holders to subsistence fish for salmon during the commercial salmon fishing season. Specifically, beginning in 2005, active commercial salmon fishing license holders in the competitive (open) fishery were allowed to subsistence fish for salmon during open fishing periods for the cooperative fishery. Alternatively, active commercial salmon fishing license holders in the cooperative fishery were allowed to subsistence fish for salmon during open fishing periods for the competitive fishery. Also, commercial salmon fishing license holders registered with the ADF&G as a member of the cooperative fishery, but not registered with the ADF&G to actively commercial fish, were allowed to subsistence fish for salmon using gillnet gear during any commercial fishing period. Although not in regulation, several of these practices were originally established as a provision of the subsistence salmon fishing permit at the beginning of the 2003 season.

Secondly, the BOF modified the language of the Chignik Area Salmon Management Plan to begin commercial salmon fishing when the ADF&G determined that a strong buildup of sockeye salmon existed in Chignik Lagoon and when 20,000 sockeye salmon have escaped into the Chignik River, regardless of a cooperative fishery. This action was in response to concerns expressed by subsistence users regarding early-season subsistence opportunities since the 40,000 sockeye salmon escapement threshold was removed in 2002. The BOF also directed the ADF&G to increase the escapement objective in August from 50,000 to 75,000 sockeye salmon to provide additional late-season fishing opportunities for subsistence users.

The Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan (5 AAC 15.359) was also modified in 2004. It was adopted into regulation that cooperative members must have validated their CFEC permits for the season before they could legally join the cooperative. It was also clarified in regulation that the ADF&G had the authority to allow both fleets to fish at the same time if necessary to control the Chignik River sockeye salmon escapement.

The BOF also allowed multiple deliveries from an individual (cooperative) catcher vessel to a single tender on the same day to be recorded on an individual fish ticket with the estimated pounds and number of fish listed by species. This regulation change required CFEC permit holders to report the delivery date, total pounds, and number of fish by species from the catcher vessel's harvest to the ADF&G by NOON the day following harvest.

The BOF additionally formalized in regulation the use of fixed leads, the ability to carry both a seine and fixed leads on board a commercial fishing vessel, and the use of net pens to hold live salmon under the conditions set forth by Commissioner’s permits for the cooperative fleet. The BOF also authorized cooperative vessels attached to a fixed lead or to a seine attached to a fixed lead to go dry or be anchored without the vessel engine running in the waters of the Chignik Bay District from Mensis Point to Pillar Rock provided the lead and seine are not configured to form a fish trap.

Finally, the Chignik area commercial salmon fishing closed waters (5 AAC 15.350(l)) were modified such that several regulatory markers, including the Pillar Rock markers that define the area where the fixed leads were used by the cooperative fleet, were placed into regulation (Figure 3). Many of these markers had been previously established and used to manage the commercial salmon fishery for several years by emergency order.

Prior to concluding the November 2004 meeting, the BOF repealed the requirement (5 AAC 15.359 (f)) established in 2002 to revisit the cooperative management plan at its first fall meeting of each year.

May 2005 Alaska Board of Fisheries Meetings

The BOF held two emergency teleconferences in May of 2005. The first meeting was held May 2 and addressed an emergency petition filed by the Chignik Seafood Producers Alliance (CSPA) in response to the Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan (5 AAC 15.359) being deemed invalid by the Alaska Supreme Court. The BOF took no regulatory action on the petition under 5 AAC 96.625 (f). Instead, it addressed the issue as emergency regulation under AS 44.62.25 (f). Under these guidelines, the BOF began deliberations on a proposal submitted by the Alaska Department of Law to revamp the cooperative management plan to address the Alaska Supreme Court ruling that all cooperative members must physically participate in the fishery to gain economic benefits from the fishery. The BOF then scheduled another teleconference on May 4 to further address the proposal. At that meeting, the BOF added the following stipulations to the cooperative management plan and readopted the plan as 5 AAC 15.358:

- In 2005 only, CFEC permit holders who joined the 2005 cooperative were eligible to participate under the new regulation and those wishing to opt out of the cooperative were allowed to do so prior to 5:00 PM on May 16, 2005.
- Each member of the cooperative must actively participate by being on-grounds and making at least 10 deliveries during the season. It was specifically stated that each member did not have to be on the fishing grounds for the entire season and that every boat registered in the Chignik fishery did not have to be utilized.
- All fish from each delivery must be reported on a single fish ticket to a single CFEC permit holder (no split deliveries were allowed).

This emergency regulation expired at the end of the 2005 commercial salmon fishing season.

Cape Igvak Salmon Management Plan

The 2005 CMA salmon fishery was also influenced by the Cape Igvak Salmon Management Plan (5 AAC 18.360). The Cape Igvak Section is the westernmost component of the Kodiak Management Area (Area K) located directly to the east of the CMA (Figure 1). If the harvestable surplus of sockeye salmon in the CMA is above or expected to be above certain thresholds (5 AAC 18.360 (a-c)), then 15 percent of the total Chignik sockeye salmon harvest (including sockeye salmon caught at Cape Igvak and within certain portions of SEDM) is allocated to Area K fishermen. Based on this management plan, 90 percent of the sockeye salmon harvested within the Cape Igvak Section are considered to be Chignik bound. This management plan is in effect from the beginning of the fishing season through July 25. After July 25, there are no allocative ties between the CMA and Area K.

Southeastern District Mainland Salmon Management Plan

Certain sockeye salmon harvested by Alaska Peninsula Management Area (Area M) fishermen under the Southeastern District Mainland (SEDM) Salmon Management Plan (5 AAC 09.360) are also allocatively considered Chignik-bound. The SEDM is composed of a group of sections at the eastern end of Area M, located directly southwest of the CMA (Figure 1). The allocation is calculated similarly to the Cape Igvak plan; if the harvestable surplus of sockeye salmon in the CMA is expected to exceed certain thresholds (5 AAC 09.360 (a-g)), then 6 percent of the total Chignik sockeye salmon harvest (including sockeye salmon caught at Cape Igvak and sockeye salmon caught within certain portions of the SEDM during specific times) is allocated to SEDM fishermen. Based on this management plan, 80 percent of the sockeye salmon harvested within certain SEDM sections during specific times are considered to be Chignik bound. This management plan is in effect from the beginning of the fishing season through July 25. After July 25, there are no allocative ties between the CMA and Area M.

2005 SALMON MANAGEMENT

The ADF&G targeted the lower bounds of the escapement goals during the 2005 season (Table 3; Appendix C1) based on limnology data from 2000 through 2004 that suggested the forage base for sockeye salmon was depressed in Chignik Lake (Bouwens and Finkle 2003a,b; Finkle 2005; Finkle and Bouwens 2001). The ADF&G first adopted this practice in 2002 to relieve grazing pressure on the zooplankton in Chignik Lake to improve juvenile sockeye salmon production.

A total of 76 Chignik CFEC permit holders chose to join the cooperative fleet in 2005, while 23 permit holders were eligible to fish competitively (Table 4). Of the harvestable surplus of sockeye salmon, 68.4 percent was allocated to the cooperative fleet, and 31.6 percent was allocated to the competitive fleet (Table 4). The first commercial fishing period began on June 5, and the last commercial fishing period ended on August 15. Commercial salmon fishing was allowed during 61 days in 2005 (Figure 4). The cooperative and competitive fleets were typically provided separate fishing periods to harvest their allocations.

Three processing facilities processed Chignik salmon in 2005: Norquest Seafoods, Island Seafoods, and True World Seafoods. Norquest filleted or headed and gutted (H&G) the majority of the fish. Some fish purchased by Norquest were transported out of the area for processing during times when catches were expected to exceed local plant capacity. Norquest also operated a live fish program where fish were held in pens until processed. Island Seafoods and True World Seafoods, shore-based processors located in Kodiak, each bought small amounts of Chignik sockeye salmon.

The Chignik Area Salmon Management Task Force (CHASM), established in 2002, is an informal group of stakeholders representing fishermen from both fleets, the processors, and the ADF&G. It provides a mechanism for the ADF&G to discuss management options and receive feedback from stakeholders. A CHASM meeting was convened on June 2. At this meeting, the ADF&G discussed fishery openings, managing for the lower end of the escapement goal ranges, and provided an update on the ongoing smolt enumeration project.

COOPERATIVE FLEET

The majority of the fishing effort in the 2005 season was by the cooperative fleet. Commercial salmon fishing began for the cooperative fleet on June 5 and ended for the season on August 15

(Figure 4). The CMA was open to commercial salmon fishing for the cooperative fleet for at least portions of 54 days in 2005.

The cooperative fleet was placed on harvest limits on 10 separate days over the 2005 season. The limits for the cooperative fleet ranged from a low of 5,000 sockeye salmon to a high of 25,000 sockeye salmon per day (Table 5). On several occasions the actual harvest was substantially over or under the limit, but overall the cooperative harvest was 7.6 percent less than the sum of the harvest limits (Table 5).

The cooperative fleet employed fixed leads for 37 days during June and July (Figure 5). Generally, the leads were attached to the shore and installed perpendicular to the flow of the stream for about half of their length. An anchor was set at the point near mid-channel, and the remainder of the net was stretched downstream parallel to the shore, and then hooked back upstream in a "J" shape. At or near high tide, a seine vessel made a "round haul" downstream of the leads to harvest the fish that had accumulated behind the leads. The cooperative fleet additionally used 225-fathom seines within the Chignik Bay District on several occasions. Reports indicate that the use of these seines increased the efficiency of the cooperative.

All cooperative fleet members made at least 10 deliveries during the 2005 commercial salmon season. A large portion of the salmon harvested by the cooperative fleet in 2005 was delivered live to the processors. The fish were either brailed or transferred with a fish pump from the seine into the tanks of a tender vessel. These tenders were equipped with oxygenation units to maintain water quality in the tanks. Live fish were then delivered to the holding pens located at the processor in Anchorage Bay.

On occasions when dead salmon were delivered to the processor (traditional delivery method), the salmon were brailed directly from the seines of the catcher boats into tenders equipped with refrigerated seawater (RSW) holds. This practice eliminated two handling steps in the delivery process; once from the seine to the hold of the catcher boat and once from the hold of the catcher boat to the hold of a tender. After processing, catch numbers and weights, by species, were assigned back to the fish tickets that contributed to each tender load.

COMPETITIVE FLEET

A total of 21 competitive fishermen made deliveries in 2005. Two additional Chignik CFEC permit holders were eligible to fish but did not make deliveries in 2005, nor did they join the cooperative. Commercial salmon fishing began for the competitive fleet on June 9 and ended for the season on August 15 (Figure 4). The CMA was open to commercial salmon fishing for the competitive fleet for at least portions of 22 days in 2005.

The competitive fleet delivered all of their fish to one processor. Salmon were caught and transferred into the holds of the seine vessels and then transferred to tenders in the traditional manner.

CHIGNIK BAY AND CENTRAL DISTRICTS COMMERCIAL SALMON FISHERY

The commercial salmon fishery began in the Chignik Bay and Central districts on June 5 (Figures 2 and 4). The Chignik Lagoon markers were placed at Humes Point for the first 24 hours of this fishing period, after which they were moved to Pillar Rock (Figure 3). Generally, the Humes Point markers were used for the first 24 hours of a commercial fishing period after an extended closure to allow the salmon above these markers to escape the fishery. In 2005, sockeye salmon occasionally spent a considerable amount of time in Chignik Lagoon, which

resulted in lower quality fish harvested in the upper lagoon. Using the Humes Point markers allowed these fish to escape the fishery. The Humes Point markers were also used on several occasions to increase escapement, especially when it was suspected that fish were holding in the lagoon. This also allowed the ADF&G to assess the magnitude of 'new fish' entering the lagoon by concentrating the effort in the lower lagoon.

The Chignik Bay and Central districts were open to commercial salmon fishing through June 25 (Figure 4). The cooperative fleet fished for the majority of this period. However, the competitive fleet fished for 48 hours beginning June 9, for 33 hours beginning June 15, and for 24 hours beginning June 24 (Figure 4). Generally, the upper lagoon markers were located at Pillar Rock for the cooperative fleet and at Mensis Point for the competitive fleet (Figure 3). The cooperative fleet was allowed to harvest fish only in the area between Mensis Point and Pillar Rock from June 9 to June 11, when fishing was open in the rest of the Chignik Bay and Central districts to the competitive fleet. The cooperative fleet was allowed to use the leads until June 16, when they were instructed to tie the lead lines to the cork lines to allow additional escapement. On June 21, the cooperative was placed on a 25,000 sockeye salmon limit (Table 5). Harvest limits were also imposed on June 22 and 23 (Table 5), although the cooperative fleet was allowed to use one lead to harvest the fish. They were required to tie the lead line to the cork line on the lead when they were done harvesting the fish for the day. They were then allowed to drop the lead again at 12:01 AM the next day. The commercial salmon fishery was then closed for two days beginning June 26 to allow additional escapement (Figure 4).

The Chignik Bay and Central districts again reopened for the cooperative fleet from June 28 to July 4, with the Chignik Lagoon markers located at Pillar Rock (Figures 2 through 4). Harvest limits were imposed on June 28, July 2, and again on July 3 (Table 5). Both leads were allowed through July 1, only the Mensis lead was allowed on July 2, and the lead lines were required to be tied to the cork lines on July 3 and July 4 (Figure 5).

The Chignik Lagoon markers were moved to Mensis Point and the commercial fishery was opened for the competitive fleet in the Chignik Bay and Central districts for 24 hours on July 4 and July 5 (Figures 2 through 4). Commercial salmon fishing reopened for the cooperative fleet in the Chignik Bay and Central districts on July 5 and remained open through July 15. Harvest limits were imposed during July 7 through July 9 and on July 12 (Table 5), and the leads were used for most of this time (Figure 5). The Chignik Lagoon markers were moved to Mensis Point and commercial salmon fishing was again opened in the Chignik Bay and Central districts for the competitive fleet for 24 hours on July 15 and 16. Commercial salmon fishing continued for the cooperative fleet from July 17 through July 24, with the markers located at Pillar Rock. No harvest limits were imposed during this period, although the use of leads was restricted at times (Table 3; Figure 5). Because the processor was full to capacity, the cooperative fleet did not harvest many fish on July 17; instead, they held the fish behind the leads until the processor was ready for additional deliveries. The competitive fleet fished again for 24 hours on July 25 and 26, and the Chignik Bay and Central districts were opened again for the cooperative fleet through July 31 (Figure 4). No harvest limits or lead restrictions were placed on the cooperative fleet during late July (Figure 5). There were no additional cooperative fishing periods in the Chignik Bay and Central Districts due to limited sockeye salmon escapement during 2005.

Commercial salmon fishing was opened for the competitive fleet on August 1 and 2. Catches during this period were low, and the fishery was allowed to close to obtain additional escapement. The competitive fleet did not achieve their allocation during this period, so the

fishery was reopened from August 4 to August 6. Due to limited effort and low sockeye salmon escapement there were no additional commercial fishing periods for the competitive fleet in the Chignik Bay and Central districts during 2005 (Figure 4).

EASTERN DISTRICT COMMERCIAL SALMON FISHERY

The Eastern District, by regulation (5 AAC 15.357 (c)(1)), opened concurrently with the Chignik Bay and Central districts in June (Figures 2 and 4). The Eastern District was also opened concurrently with the Chignik Bay and Central districts through July 4. There was no effort in the Eastern District in June or early July.

Local markets were generally not interested in purchasing pink and chum salmon from the outside (Western, Perryville, and Eastern) districts (Figure 2). On several occasions, the ADF&G issued a news release stating there was an available surplus of pink and chum salmon in areas of the outside districts, and fishermen should contact the ADF&G if they were able to secure a market for these fish. At that point, a localized bay would be opened based on aerial survey escapement data. The ADF&G choose not to open any additional outside waters due to sockeye salmon escapement concerns. Portions of the Eastern District were opened on four occasions for pink and chum salmon for both fleets concurrently (Figure 4). There was only participation during one of these fishing periods.

WESTERN AND PERRYVILLE DISTRICTS COMMERCIAL SALMON FISHERY

By regulation the Western and Perryville districts are closed to commercial salmon fishing in June (5 AAC 15.357 (d)). Beginning approximately July 6, these districts can be opened on a commercial test fishery basis targeting migrating pink and chum salmon. Once these fish enter local streams, management shifts to an escapement-based strategy.

Two 48-hour commercial salmon fishing periods were opened for both fleets beginning July 6 and July 15 (Figure 4). Only competitive fleet members participated in these commercial salmon fishing periods.

ESCAPEMENT AND HARVEST DATA

Stock Separation Techniques

Two distinct sockeye salmon runs (an early and late run) enter the Chignik River system and temporally overlap during late June and early July. Prior to 2004, scale pattern analysis (SPA) was used to differentiate stock composition during this overlap period, and the fishery was subsequently managed based on SPA results. The SPA program was discontinued prior to the 2004 season due to funding limitations. However, it found, on average, the number of early-run sockeye salmon that passed the Chignik weir after July 4 was approximately equal to the number of late-run sockeye salmon that passed the weir prior to July 4 (Table 6).

Escapement Information

In June 2004, a salmon escapement goal review team, including staff from the Division of Commercial Fisheries and the Sport Fish Division, was formed to review salmon escapement goals in the CMA. The team recommended that the Chignik River watershed sockeye salmon escapement goal ranges for the early- (350,000 to 400,000) and late-run (200,000 to 250,000) should not be changed. However, the team felt scientifically defensible estimates of maximum sustainable yield were no longer possible due to the lack of significant spawner-recruit

relationships. Thus, the team recommended Chignik River sockeye salmon escapement goals should be reclassified as sustainable escapement goals (SEGs) rather than biological escapement goals (BEGs). Despite this change, the team noted past run data have indicated that sustained Chignik River sockeye salmon yields have occurred in excess of the 5 to 10 year period specified for SEGs.

The team also recommended establishing two (even- and odd-years) pink salmon aggregate BEGs to replace the five previous district-wide pink salmon SEGs. The team similarly recommended establishing one area-wide chum salmon SEG to replace the five previous district-wide chum salmon SEGs. The BOF adopted all these recommendations into regulation in November 2005. A summary and comprehensive results of this review can be found in Witteveen et al. (2005).

In 2005, salmon and Dolly Varden *Salvelinus malma* escapements to the Chignik River were enumerated through the use of a weir. There were two gates in the weir, which were generally always open to allow for unrestricted passage. Underwater video equipment was used to count fish passing through the weir gates. At night, lights allowed fish to be counted. The number of fish passing the weir, by species, were counted for the first 10 minutes of each hour, then multiplied by six to obtain hourly escapement estimates. Hourly estimates were then summed to provide an estimate of daily fish passage. Digital video recordings of the escapement were made for each 10 minute counting period and archived.

The majority of the Chignik River Chinook, sockeye, pink, and chum salmon escapements were counted through the weir. Since Dolly Varden were not commercially harvested or actively managed in the CMA, their escapements are noted in the tables of this document for historical comparisons but not discussed in detail in the escapement section below. The first count of the 2005 season was on June 1, and the last full count of the season was on September 3 after which the weir was removed. A post-weir sockeye salmon escapement estimate was produced using time series analysis and the results were reported grouped into periods from September 4 to 15 and September 16 to 30. The coho salmon run was still building when the weir was removed, thus the coho salmon counts were considered incomplete and it was not possible to estimate the post-weir coho salmon escapement.

Aerial surveys were flown on the spawning grounds of the Chignik River watershed to assess sockeye salmon spawning escapement levels and distribution. Escapements to other CMA streams were also estimated via aerial survey.

Chinook Salmon

Chinook salmon began entering the Chignik River in mid-June. The run peaked in early-July, and was over by late-August (Table 7; Figure 6). The 2005 Chignik River Chinook salmon escapement of 6,486 was well above the 5-, 10-, and 20-year average escapements (Table 8) and substantially exceeded the Chignik River Chinook BEG range of 1,300 to 2,700 fish (Figure 7; Witteveen et al. 2005). The Chignik River is the only stream with substantial Chinook salmon production within the CMA.

Sockeye Salmon

Chignik River sockeye salmon are managed based on interim escapement objectives, by run (Table 3; Witteveen et al. 2005). These objectives included an additional 50,000 sockeye salmon

above the late-run SEG (25,000 fish in August and 25,000 fish in September) to meet late-season subsistence needs.

The Chignik River sockeye salmon early-run peaked in late June while the late-run peaked in July (Figure 8). The 2005 total estimated escapement for Chignik River sockeye salmon was 580,457 fish (Tables 9 and 10), which was approximately 200,000 fish below the 5-, 10-, and 20-year escapement averages (Table 10). The early-run was estimated at 355,091 sockeye salmon, which achieved the early-run SEG range of 350,000 to 400,000 fish (Table 10; Figure 9). The late-run was estimated at 225,366 sockeye salmon, which achieved the late-run SEG range of 200,000 to 250,000 fish (Table 10; Figure 9). However, the late run did not achieve the late-run management objective which includes an additional 50,000 fish in addition to the late-run SEG. Both runs combined were below recent 5-, 10-, and 20- year average escapements (Table 10; Figure 10).

Peak aerial survey counts of spawning sockeye salmon in the Chignik River watershed were lower than the 5-, 10-, and 20-year averages (Tables 11 and 12). However, aerial surveys of these streams were not flown as often or as thoroughly as in some other years, and the actual peaks may not have been documented.

Sockeye salmon escapements were documented, via aerial survey, in low numbers (generally less than 5,000 fish) in several other CMA streams. Due to small run sizes and limited effort, escapement goals for these streams have not been established (Witteveen et al. 2005).

Coho Salmon

Coho salmon enter CMA drainages in mid-August and continue through November. The 2005 Chignik River coho salmon escapement estimate through September 3 (weir removed September 4) was 18,206 (Table 7), which was approximately 10,000 more coho salmon more than the 5- and 10-year average escapements (Table 8). Coho salmon escapements were monitored, via aerial survey, in low numbers (generally less than 2,000 fish) in several other CMA streams.

Due to late season run timing and limited directed effort, escapement goals for coho salmon have not been established in the CMA (Witteveen et al. 2005).

Pink Salmon

Pink salmon enter the Chignik River in July and August. The 2005 Chignik River pink salmon escapement was 13,637 salmon (Table 7), which was the largest pink salmon escapement on record (Table 8).

Escapements into other CMA streams were monitored via aerial survey, summed for each district, and compared to district management objectives and the area-wide odd-year aggregate BEG for pink salmon (Witteveen et al. 2005). The management objectives for all CMA districts were met or exceeded in 2005 (Table 13). The overall combined escapement of approximately 1.6 million pink salmon substantially exceeded the aggregate odd-year pink salmon BEG range (541,000-1,177,000; Table 13).

Chum Salmon

A limited number of chum salmon return to the Chignik River, mainly in August (Table 7). The 2005 Chignik River chum salmon escapement was 408 fish, which was the second largest chum salmon escapement on record (Table 8).

Escapements into other CMA streams were monitored via aerial survey, summed for each district and compared to district management objectives and the area-wide SEG for chum salmon (Witteveen et al. 2005) The management objectives for all CMA districts were exceeded in 2005 (Table 14). The overall combined escapement of approximately 309,000 chum salmon exceeded the aggregate area-wide SEG (50,400; Table 14).

Harvest Information

The 2005 commercial salmon harvest was organized into four categories. The first category included fish that were commercially harvested but retained for personal consumption (home pack). The second category included salmon that were harvested and sold as part of the ADF&G test fishery program. The third category included sockeye salmon commercially harvested by the cooperative and competitive fleets within the CMA. The final category included sockeye salmon commercially harvested under the Cape Igvak and SEDM management plans. For allocative purposes, the BOF has determined that specific portions of these harvests were considered bound for the Chignik River.

Salmon harvested under subsistence regulations or the ADF&G Chignik test fishery were not included in any of the current harvest allocations. Home pack fish were included in the within-CMA sockeye salmon allocation scheme (cooperative versus competitive fleet), but not in the Cape Igvak and SEDM allocations. All harvest information in this report was calculated from the ADF&G fish ticket database on December 18, 2006 and supersedes any previously published data.

Chinook Salmon

A total of 3,408 Chinook salmon were harvested in 2005, which is greater than the recent 5- and 10-year average Chinook salmon harvests (Table 15). One of these salmon was harvested as part of the department's test fishery program, and 271 were retained as home pack (Table 16). The majority of the CMA Chinook salmon harvest in 2005 took place in the Chignik Bay District (Table 17). Most Chinook salmon were harvested from late June through mid-July in 2005 (Table 18).

Sockeye Salmon

A total of 1,152,133 sockeye salmon were harvested in the CMA during 2005, which was less than 5-, 10-, and 20-year average harvests (Table 15). The department's test fishery program harvested 7,076 of these salmon and an additional 1,364 fish were retained as home pack (Table 19). The vast majority of the CMA sockeye salmon harvest in 2005 came from the Chignik Bay District (Table 20) and most sockeye salmon were harvested during June and July (Table 21).

An additional 444,990 sockeye salmon considered Chignik-bound were harvested as part of the SEDM and Cape Igvak fisheries during 2005. The Chignik-bound component of the SEDM harvest was 170,662 fish and totaled 10.7 percent of the total Chignik-bound harvest (allocation 6.0 percent; Table 22). The Chignik-bound portion of the Cape Igvak harvest was 274,328 fish and totaled 17.2 percent of the total Chignik-bound harvest (allocation 15.0 percent; Table 22).

The cooperative fleet was allocated 68.4 percent and the competitive fleet was allocated 31.6 percent of the within-CMA sockeye salmon harvest (Table 4). The cooperative fleet harvested a total (including home pack) of 782,206 sockeye salmon, or 1,013 fish over their allocation of the CMA sockeye salmon harvest (Table 23; Appendix D1). The competitive fleet harvested a total

(including home pack) of 362,851 sockeye salmon, or 1,103 fish under their allocation of the CMA sockeye salmon harvest (Table 23; Appendix D2).

The 2005 Chignik River sockeye salmon early-run harvest was slightly above 5-, 10-, and 20-year averages, while the late- run harvest was substantially below 5-, 10-, and 20-year averages (Table 24; Figure 10). The early run was below the 2005 forecast by approximately 21 percent while the late run was over forecasted by approximately 29 percent (Table 25). For both runs combined, the 2005 forecast was less accurate than the 10-year average forecast, but more accurate than the 5-year forecast accuracy (Table 25).

Coho Salmon

A total of 6,956 coho salmon were harvested in the CMA in 2005 which was considerably less than the prior 5-, 10- and 20-year average harvests (Tables 15 and 26). Nearly all coho salmon were sold to processors by fishermen (Table 26). The majority of the 2005 coho salmon harvest occurred in the Western, Central, and Perryville districts during July (Tables 27 and 28).

Pink Salmon

Due to limited directed effort, the 2005 pink salmon harvest was relatively minor. A total of 194,045 pink salmon were harvested in 2005, which was below the 5-, 10-, and 20-year average harvests (Tables 15 and 29). Nearly all pink salmon were sold to processors by fishermen (Table 29). The majority of pink salmon harvest occurred in the Chignik Bay and Central districts between mid-July and mid-August (Tables 30 and 31).

Chum Salmon

Similar to pink salmon, there was no directed chum salmon market in 2005. A total of 8,821 chum salmon were harvested, which was well below the 5-, 10-, and 20-year average harvests (Tables 15 and 32). One hundred fifteen chum salmon were retained for personal use and the rest were sold to processors by fishermen (Table 32). The majority of the 2005 chum salmon harvest occurred in the Central and Chignik Bay districts during July (Tables 33 and 34).

Economic Value

The exvessel value of the 2005 CMA salmon harvest was about $6.4 million, or approximately $65,600 per permit holder, which was below recent 5-, 10- and 20-year exvessel value averages (Table 35). The vast majority of the revenue was from the sale of sockeye salmon. The harvest of pink salmon provided about $562 per permit holder while Chinook, coho, and chum salmon provided $377, $115 and $111 each respectively per permit holder (Table 35).

CHIGNIK LAGOON TEST FISHERIES

The ADF&G conducts test fisheries in Chignik Lagoon for multiple purposes. Early-season test fisheries are used to determine buildup of salmon prior to the first commercial fishery, to collect sockeye salmon scale samples to determine age composition, and to generate revenue to pay for the vessels chartered to conduct the test fisheries. Mid- to late-season department test fisheries are conducted to collect sockeye salmon scale samples during fishery closures and offset operational costs associated with the scale sampling program.

The department conducted three test fisheries and harvested a total of 7,087 salmon in 2005. The first test fishery occurred on June 3, when 876 sockeye salmon were harvested. This fishery was conducted prior to the first commercial fishing period in the CMA. The second and third test

fisheries occurred on June 21 and June 29. A total of 6,200 sockeye, 1 Chinook, 8 pink, and 2 chum salmon were harvested during these fisheries.

CHIGNIK AREA SUBSISTENCE SALMON FISHERIES

In recent years, large pulses of salmon did not build in Chignik Lagoon or pass through the weir. Thus, early-season subsistence fishing opportunities were limited by the slow movement of fish. Consequently, several subsistence users reported they had a difficult time harvesting enough salmon to meet their needs.

In response to these concerns, the BOF (November 2004) increased subsistence fishing opportunities in the CMA. The Chignik River was historically closed to subsistence salmon fishing by regulation (5 AAC 01.475). However, beginning in 2005 the BOF opened the Chignik River to subsistence salmon fishing, excluding the area 300 feet upstream and downstream of the Chignik weir, for a portion of the season. The reach of the Chignik River up to 300 feet below the weir was open to subsistence fishing year-round. The reach from 300 feet above the weir to the outlet of Chignik Lake was open year-round, except from July 1 through August 31 to protect spawning Chinook salmon.

Historically, commercial fishing license holders were not allowed to subsistence fish for salmon from 48 hours before the first commercial salmon fishing period through September 30 in the CMA. This regulation was relaxed via provisions of the subsistence fishing permit to allow fishermen to harvest subsistence fish during the commercial fishing season in 2003 and 2004. In the fall of 2004, the BOF adopted regulations that allowed commercial salmon fishing license holders to, with certain restrictions (5 AAC 01.485), harvest subsistence salmon during the 2005 commercial salmon fishing season.

The BOF also directed the ADF&G to manage the August commercial salmon fishery to allow for an additional 25,000 (75,000 total) sockeye salmon to escape into the Chignik River to facilitate additional late-season harvest opportunities. Despite limited commercial salmon fishing during August, this objective was not achieved in 2005.

In 2005, the ADF&G issued 119 subsistence fishing permits in the CMA. Based on the 100 permits returned to the ADF&G Division of Subsistence, the estimated subsistence total harvest was 11,590 salmon. This harvest was slightly below the recent 5-, 10-, and 20-year subsistence harvest averages (Table 36). Sockeye salmon comprised the vast majority of the 2005 subsistence harvest.

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TABLES AND FIGURES

Table 1.-List of Chignik Management Area herring management units.

Location	Stat. Area(s)
Chignik Lagoon and Bay	271-10 to 272-40
Kujulik	272-50
Big River	272-60 to 272-70
Cape Kumlik	272-62 to 272-64
Yantarni	272-72 to 272-80
Chiginagak	272-90
Agripina	272-92 to 272-96
Mitrofania	273-70 to 273-74
Dorner Bay	273-82 to 273-84
Castle Cape	273-90 to 273-94
Perryville	275-60
Humpback Bay	275-50
Ivanof Bay	275-40

Table 2.-Chignik Management Area commercial herring harvest, 1980 through 2005.

Year	Harvest (tons)
1980	587
1981	441
1982	190
1983	88
1984	66
1985	0
1986	11
1987	75
1988	59
1989	66
1990	0
1991	0
1992	0
1993	0
1994	0
1995	77
1996	6
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	0

Table 3.-Chignik River sockeye salmon interim escapement objectives, 2005.

Date	Escapement Lower		Upper
June 2	500	-	1,000
June 4	2,000	-	3,000
June 6	5,000	-	7,000
June 8	10,000	-	14,000
June 10	20,000	-	25,000
June 12	30,000	-	40,000
June 14	50,000	-	70,000
June 16	75,000	-	110,000
June 18	125,000	-	160,000
June 20	175,000	-	220,000
June 22	225,000	-	275,000
June 25	275,000	-	325,000
June 28	300,000	-	350,000
July 1	325,000	-	375,000
July 4	350,000	-	400,000 [a]
July 6	5,000	-	10,000
July 8	15,000	-	20,000
July 10	30,000	-	40,000
July 12	45,000	-	60,000
July 14	56,000	-	75,000
July 16	67,000	-	90,000
July 19	86,000	-	115,000
July 21	101,000	-	135,000
July 23	120,000	-	160,000
July 26	135,000	-	180,000
July 29	146,000	-	195,000
July 31	150,000	-	200,000

Date	Escapement Lower		Upper
August 3	4,500	-	10,500
August 6	8,250	-	21,750
August 9	15,000	-	30,000
August 12	22,500	-	37,500
August 15	30,000	-	45,000
August 18	37,500	-	52,500
August 21	45,000	-	60,000
August 24	53,250	-	66,750
August 27	64,500	-	70,500
August 31	75,000	-	75,000
September 3	3,000	-	4,000
September 5	6,000	-	8,000
September 7	10,000	-	12,000
September 9	14,000	-	16,000
September 11	18,000	-	20,000
September 13	22,000	-	23,000
September 15	25,000	-	25,000

Escapement Objectives

Through July 4:	**350,000**	**-**	**400,000**
July 5 - September 15:	**250,000**	**-**	**300,000**

[a] July 4 is historically the date on which the cumulative inseason escapement most closely approximated the early-run escapement as estimated by post-season scale pattern analysis.

Table 4.-Chignik Management Area fleet membership and allocations, by year, 2002 through 2005.

	Number of CFEC permit holders			Allocation (Percent)	
Year	Cooperative	Competitive	Total	Cooperative	Competitive
2002	77	22	99	69.3	30.7
2003	77	24	101	69.3	30.7
2004	87	13	100	87.0	13.0
2005	76	23 [a]	99	68.4	31.6

[a] Two CFEC permit holders did not make deliveries in 2005, nor did they join the cooperative

Table 5.-Daily cooperative fleet sockeye salmon harvest limits, actual catch, difference, and percent difference, 2005.

Day	Limit	Actual Catch	Difference	% Difference
6/21	25,000	21,891	-3,109	-12.4
6/22	10,000	12,102	2,102	21.0
6/23	5,000	6,267	1,267	25.3
6/28	7,500	6,805	-695	-9.3
7/2	10,000	8,187	-1,813	-18.1
7/3	5,000	4,361	-639	-12.8
7/7	7,500	7,525	25	0.3
7/8	10,000	8,461	-1,539	-15.4
7/9	10,000	7,505	-2,495	-25.0
7/12	10,000	9,308	-692	-6.9
Total	100,000	92,412	-7,588	-7.6

Table 6.-Estimated early- and late-run sockeye salmon escapements and estimated 50/50 dates to the Chignik River, based on inseason and postseason run apportionment models, 1986 through 2005.

	Inseason	Postseason			
Year	50/50 date	Early run	Late run	50/50 date	Total Escapement
1986	ND	566,088	207,231	7/15	773,319
1987	ND	589,291	214,452	7/26	803,743
1988[a]	7/5	420,577	255,180	6/29	675,757
1989[a]	7/7	384,004	557,171	8/2	941,175
1990[a]	7/9	434,543	335,867	6/26	770,410
1991[a]	7/15	657,511	382,587	6/24	1,040,098
1992[a]	7/15	360,681	405,922	7/15	766,603
1993	7/4	364,261	333,116	7/5	697,377
1994	7/15	769,462	197,447	7/28	966,909
1995	7/5	366,163	373,757	7/8	739,920
1996	7/14	464,461	284,676	7/20	749,137
1997	7/6	396,667	378,951	7/9	775,618
1998	7/8	410,659	290,379	7/5	701,038
1999	7/10	457,429	258,537	7/9	715,966
2000	7/14	536,141	269,084	7/14	805,225
2001	7/16	744,013	392,905	7/6	1,136,918
2002	7/15	380,701	343,616	7/8	724,317
2003	7/5	350,004	334,119	7/4	684,123
2004[b]	ND	363,800	214,459	ND	578,259
2005[b]	ND	355,091	225,366	ND	580,457

[a] Average Time of Entry (ATOE) curves were used for inseason management.

[b] The SPA project was discontinued prior to the 2004 season.

Table 7.-Estimated Chignik River Chinook, coho, pink, and chum salmon and Dolly Varden escapement, by day, 2005.

	Chinook		Coho		Pink		Chum		Dolly Varden	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
6/1	0	0	0	0	0	0	0	0	15	15
6/2	0	0	0	0	0	0	0	0	0	15
6/3	0	0	0	0	0	0	0	0	0	15
6/4	0	0	0	0	0	0	0	0	0	15
6/5	0	0	0	0	0	0	0	0	0	15
6/6	0	0	0	0	0	0	0	0	0	15
6/7	0	0	0	0	0	0	0	0	0	15
6/8	0	0	0	0	0	0	0	0	0	15
6/9	0	0	0	0	0	0	0	0	0	15
6/10	0	0	0	0	0	0	0	0	0	15
6/11	0	0	0	0	0	0	0	0	0	15
6/12	0	0	0	0	0	0	0	0	0	15
6/13	0	0	0	0	0	0	0	0	0	15
6/14	0	0	0	0	0	0	0	0	0	15
6/15	0	0	0	0	0	0	0	0	26	41
6/16	0	0	0	0	0	0	0	0	438	479
6/17	0	0	0	0	0	0	0	0	198	677
6/18	0	0	0	0	0	0	0	0	1,104	1,781
6/19	0	0	0	0	6	6	0	0	564	2,345
6/20	6	6	0	0	0	6	0	0	188	2,533
6/21	78	84	0	0	0	6	0	0	478	3,011
6/22	33	117	0	0	0	6	0	0	253	3,264
6/23	79	196	0	0	1	7	0	0	594	3,858
6/24	66	262	0	0	0	7	0	0	210	4,068
6/25	30	292	0	0	0	7	0	0	168	4,236
6/26	178	470	0	0	0	7	0	0	402	4,638
6/27	145	615	0	0	0	7	0	0	774	5,412
6/28	114	729	0	0	0	7	0	0	737	6,149
6/29	180	909	0	0	0	7	0	0	1,344	7,493
6/30	156	1,065	0	0	1	8	0	0	883	8,376
7/1	158	1,223	0	0	24	32	0	0	354	8,730
7/2	122	1,345	0	0	36	68	0	0	798	9,528
7/3	234	1,579	0	0	37	105	0	0	366	9,894
7/4	403	1,982	0	0	120	225	0	0	264	10,158
7/5	162	2,144	0	0	66	291	0	0	264	10,422
7/6	194	2,338	0	0	12	303	0	0	338	10,760
7/7	231	2,569	0	0	84	387	0	0	535	11,295
7/8	325	2,894	0	0	78	465	0	0	276	11,571
7/9	558	3,452	0	0	132	597	0	0	264	11,835
7/10	290	3,742	0	0	36	633	0	0	278	12,113
7/11	133	3,875	0	0	12	645	0	0	120	12,233
7/12	180	4,055	0	0	144	789	0	0	78	12,311
7/13	156	4,211	0	0	162	951	0	0	114	12,425
7/14	147	4,358	0	0	6	957	6	6	42	12,467
7/15	103	4,461	0	0	60	1,017	0	6	54	12,521
7/16	148	4,609	0	0	48	1,065	0	6	54	12,575

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Table 7.-Page 2 of 3.

	Chinook		Coho		Pink		Chum		Dolly Varden	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
7/17	185	4,794	0	0	250	1,315	0	6	37	12,612
7/18	138	4,932	0	0	114	1,429	0	6	78	12,690
7/19	174	5,106	0	0	84	1,513	0	6	102	12,792
7/20	98	5,204	0	0	48	1,561	0	6	72	12,864
7/21	133	5,337	0	0	178	1,739	0	6	19	12,883
7/22	176	5,513	0	0	336	2,075	0	6	42	12,925
7/23	109	5,622	0	0	300	2,375	6	12	31	12,956
7/24	282	5,904	0	0	180	2,555	0	12	78	13,034
7/25	72	5,976	0	0	198	2,753	42	54	30	13,064
7/26	24	6,000	0	0	180	2,933	6	60	24	13,088
7/27	99	6,099	0	0	166	3,099	1	61	19	13,107
7/28	48	6,147	0	0	199	3,298	48	109	0	13,107
7/29	49	6,196	0	0	120	3,418	36	145	25	13,132
7/30	6	6,202	0	0	216	3,634	6	151	86	13,218
7/31	12	6,214	0	0	163	3,797	12	163	18	13,236
8/1	12	6,226	0	0	246	4,043	12	175	30	13,266
8/2	6	6,232	0	0	138	4,181	30	205	24	13,290
8/3	21	6,253	0	0	262	4,443	0	205	7	13,297
8/4	20	6,273	3	3	237	4,680	30	235	1	13,298
8/5	0	6,273	42	45	216	4,896	0	235	24	13,322
8/6	18	6,291	0	45	282	5,178	12	247	18	13,340
8/7	30	6,321	0	45	150	5,328	6	253	0	13,340
8/8	30	6,351	0	45	203	5,531	6	259	48	13,388
8/9	0	6,351	0	45	162	5,693	6	265	6	13,394
8/10	1	6,352	1	46	2	5,695	0	265	0	13,394
8/11	2	6,354	0	46	221	5,916	0	265	6	13,400
8/12	12	6,366	6	52	330	6,246	30	295	60	13,460
8/13	8	6,374	6	58	448	6,694	18	313	18	13,478
8/14	24	6,398	0	58	811	7,505	42	355	0	13,478
8/15	30	6,428	0	58	760	8,265	3	358	12	13,490
8/16	18	6,446	1	59	738	9,003	0	358	24	13,514
8/17	12	6,458	0	59	690	9,693	6	364	18	13,532
8/18	6	6,464	2	61	57	9,750	0	364	12	13,544
8/19	4	6,468	25	86	244	9,994	0	364	6	13,550
8/20	0	6,468	259	345	386	10,380	0	364	186	13,736
8/21	6	6,474	310	655	312	10,692	12	376	18	13,754
8/22	6	6,480	294	949	366	11,058	0	376	18	13,772
8/23	6	6,486	385	1,334	396	11,454	12	388	0	13,772
8/24	0	6,486	80	1,414	120	11,574	0	388	0	13,772
8/25	0	6,486	21	1,435	4	11,578	2	390	0	13,772
8/26	0	6,486	282	1,717	243	11,821	6	396	0	13,772
8/27	0	6,486	478	2,195	208	12,029	6	402	144	13,916
8/28	0	6,486	293	2,488	234	12,263	0	402	0	13,916
8/29	0	6,486	642	3,130	144	12,407	0	402	0	13,916
8/30	0	6,486	1,385	4,515	324	12,731	0	402	0	13,916

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Table 7.-Page 3 of 3.

	Chinook		Coho		Pink		Chum		Dolly Varden	
Date	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative	Daily	Cumulative
8/31	0	6,486	2,147	6,662	358	13,089	0	402	6	13,922
9/1	0	6,486	4,336	10,998	246	13,335	6	408	0	13,922
9/2	0	6,486	2,523	13,521	146	13,481	0	408	0	13,922
9/3	0	6,486	4,685	18,206	156	13,637	0	408	18	13,940
Totals	6,486		18,206		13,637		408		13,940	

Table 8.-Estimated Chignik River Chinook, coho, pink, and chum salmon and Dolly Varden escapement, 1970 through 2005.

	Escapement[a]				
Year	Chinook [b]	Coho [c]	Pink [c]	Chum [c]	Dolly Varden [c]
1970	2,500	ND	ND	ND	ND
1971	2,000	ND	ND	ND	ND
1972	1,500	ND	ND	ND	ND
1973	822	ND	ND	ND	ND
1974	672	ND	ND	ND	ND
1975	877	ND	ND	ND	ND
1976	700	ND	ND	ND	ND
1977	798	ND	ND	ND	ND
1978	1,197	ND	ND	ND	ND
1979	1,050	ND	ND	ND	ND
1980	876	ND	ND	ND	ND
1981	1,603	ND	ND	ND	ND
1982	2,412	ND	ND	ND	ND
1983	1,943	ND	ND	ND	ND
1984	5,806	ND	ND	ND	ND
1985	3,144	ND	ND	ND	ND
1986	3,612	ND	ND	ND	ND
1987	2,624	ND	ND	ND	ND
1988	4,868	ND	ND	ND	ND
1989	3,316	ND	ND	ND	ND
1990	4,364	ND	ND	ND	ND
1991	4,531	ND	ND	ND	ND
1992	3,806	ND	ND	ND	ND
1993	1,946	ND	ND	ND	ND
1994	2,963	ND	ND	ND	ND
1995	4,288	ND	ND	ND	ND
1996	3,488	16,843	6,030	136	54,726
1997	3,824	10,810	4,880	483	26,657
1998	3,075	14,124	11,490	156	15,235
1999	3,728	2,414	2,524	48	15,025
2000	4,285	7,062	4,284	48	ND
2001	3,028	103	1,464	66	6,416
2002	3,541	9,262	3,417	67	8,179
2003	6,412	7,635	1,897	68	36,397
2004	7,840	18,810	2,243	276	20,086
2005	6,486	18,206	13,637	408	13,940
Averages					
1985-04	3,934	-	-	-	-
1995-04	4,351	9,674 [d]	4,248 [d]	150 [d]	22,840 [d]
2000-04	5,021	8,574	2,661	105	17,770

[a] A video monitoring system was installed at the Chignik weir in 1994.

[b] No escapement adjustments are made for Chinook salmon that spawn below the weir, or those removed by the sport fishery. Only large fish enumerated for escapement estimates from 1970 to 1993.

[c] No reliable escapement estimates where generated for pink, chum, or coho salmon or Dolly Varden from 1970 to 1996. No post-weir estimates are reported here for these species.

[d] Calculations do not include data from 1995.

Table 9.-Estimated Chignik River sockeye salmon escapement, by day and management objective period, 2005.

Early Run			Late Run								
Through July 4			July 5-July 31			August			September		
Date	Daily	Total	Date	Daily	Total	Date	Daily	Total	Date	Daily	Total
6/1	2,196	2,196	7/5	3,648	3,648	8/1	4,035	4,035	9/1	1,009	1,009
6/2	4,093	6,289	7/6	1,983	5,631	8/2	3,073	7,108	9/2	449	1,458
6/3	3,768	10,057	7/7	5,322	10,953	8/3	2,186	9,294	9/3	432	1,890
6/4	10,023	20,080	7/8	6,876	17,829	8/4	2,857	12,151	9/4-9/15 estimate	5,654	7,333
6/5	17,015	37,095	7/9	10,837	28,666	8/5	2,692	14,843	9/16-9/30 estimate	1,503	9,003
6/6	19,086	56,181	7/10	7,196	35,862	8/6	3,599	18,442		**Total:**	**9,003**
6/7	16,354	72,535	7/11	3,029	38,891	8/7	2,088	20,530			
6/8	11,511	84,046	7/12	8,431	47,322	8/8	2,436	22,966			
6/9	5,168	89,214	7/13	18,271	65,593	8/9	1,328	24,294			
6/10	16,893	106,107	7/14	1,938	67,531	8/10	267	24,561			
6/11	6,179	112,286	7/15	4,447	71,978	8/11	2,119	26,680			
6/12	5,295	117,581	7/16	3,921	75,899	8/12	1,554	28,234			
6/13	4,794	122,375	7/17	2,777	78,676	8/13	1,135	29,369			
6/14	5,085	127,460	7/18	4,764	83,440	8/14	1,797	31,166			
6/15	11,189	138,649	7/19	4,312	87,752	8/15	1,510	32,676			
6/16	6,136	144,785	7/20	6,208	93,960	8/16	1,659	34,335			
6/17	4,452	149,237	7/21	10,030	103,990	8/17	1,960	36,295			
6/18	10,944	160,181	7/22	6,489	110,479	8/18	440	36,735			
6/19	14,921	175,102	7/23	11,216	121,695	8/19	1,948	38,683			
6/20	14,937	190,039	7/24	12,870	134,565	8/20	1,715	40,398			
6/21	12,468	202,507	7/25	9,085	143,650	8/21	1,375	41,773			
6/22	13,021	215,528	7/26	3,258	146,908	8/22	1,308	43,081			
6/23	19,718	235,246	7/27	2,400	149,308	8/23	1,329	44,410			
6/24	19,752	254,998	7/28	3,168	152,476	8/24	511	44,921			
6/25	4,969	259,967	7/29	3,918	156,394	8/25	273	45,194			
6/26	10,722	270,689	7/30	4,302	160,696	8/26	1,526	46,720			
6/27	24,205	294,894	7/31	2,087	162,783	8/27	2,016	48,736			
6/28	16,300	311,194		**Total:**	**162,783**	8/28	1,002	49,738			
6/29	7,248	318,442				8/29	1,308	51,046			
6/30	6,196	324,638				8/30	1,584	52,630			
7/1	3,103	327,741				8/31	950	53,580	**Early run total:**		**355,091**
7/2	5,490	333,231					**Total:**	**53,580**			
7/3	10,235	343,466							**Late run total:**		**225,366**
7/4	11,625	355,091									
	Total:	**355,091**							**Season total:**		**580,457**

[a] The weir was removed after the completion of the 9/3 count.

Table 10.-Total Chignik River sockeye salmon escapement and escapement goals, based on postseason analysis, by run, 1970 through 2005.

Year	Early Run	Late Run	Total
1970	536,257	119,952	656,209
1971	671,668	232,501	904,169
1972	326,320	231,270	557,590
1973	533,047	249,144	782,191
1974	351,701	326,245	677,946
1975	308,914	268,734	577,648
1976	551,254	279,509	830,763
1977	482,247	251,753	734,000
1978	458,660	223,887	682,547
1979	385,694	352,122	737,816
1980	311,332	352,729	664,061
1981	438,540	392,909	831,449
1982	616,117	221,601	837,718
1983	426,177	409,458	835,635
1984	597,712	267,862	865,574
1985	376,576	369,262	745,838
1986	566,088	207,231	773,319
1987	589,291	214,452	803,743
1988	420,577	255,180	675,757
1989	384,004	557,171	941,175
1990	434,543	335,867	770,410
1991	672,871	367,227	1,040,098
1992	360,681	405,922	766,603
1993	364,261	333,116	697,377
1994	769,462	197,447	966,909
1995	366,163	373,757	739,920
1996	464,461	284,676	749,137
1997	396,667	378,951	775,618
1998	410,659	290,469	701,128
1999	457,429	258,537	715,966
2000	536,141	269,084	805,225
2001	744,013	392,905	1,136,918
2002	380,701	343,616	724,317
2003	350,004	334,119	684,123
2004	363,800	214,459	578,259
2005	355,091	225,366	580,457
SEG	350,000-400,000	200,000-250,000	550,000-650,000
Averages			
1985-04	470,420	319,172	789,592
1995-04	447,004	314,057	761,061
2000-04	474,932	310,837	785,768

Table 11.-Peak sockeye salmon aerial survey escapement estimates for the Black Lake tributaries, 1960 through 2005.

Year	Fan Creek	Milk Creek	Boulevard Creek	Alec River	Conglomerate Creek	Broad Creek	Total
1960	38,500	8,000	40,000	30,000	3,000	30,000	149,500
1961	27,000	5,000	28,700	25,000	800	17,000	103,500
1962	18,000	7,000	13,000	60,000	200	15,000	113,200
1963	39,000	ND	36,000	85,000	1,000	61,000	222,000
1964	19,500	3,050	23,850	17,900	9,300	9,500	83,100
1967	20,000	1,000	9,000	156,000	10,000	10,000	206,000
1968	32,000	2,400	20,000	60,000	2,000	4,100	120,500
1969	103,000	2,100	33,000	50,000	4,000	5,000	197,100
1970	146,000	9,000	55,500	198,000	5,000	ND	413,500
1971	105,000	14,000	85,000	158,000	0	ND	362,000
1972	18,000	3,500	19,000	74,000	400	ND	114,900
1973	115,000	4,000	76,000	74,000	5,000	ND	274,000
1974	90,000	5,000	50,000	93,000	5,000	ND	243,000
1975	40,000	4,500	25,000	87,000	0	ND	156,500
1976	78,000	8,900	100,000	119,000	2,000	ND	307,900
1977	88,000	20,000	127,000	133,000	1,000	ND	369,000
1978	114,000	3,300	74,000	83,300	500	ND	275,100
1979	37,000	11,800	32,000	105,100	400	26,100	212,400
1980	127,000	16,000	75,000	70,500	1,500	68,000	358,000
1981	93,000	4,700	59,000	76,500	20,000	27,000	280,200
1982	50,000	5,500	60,000	43,000	20,000	32,000	210,500
1983	ND	ND	ND	ND	ND	ND	-
1984	50,000	22,200	70,000	30,500	31,000	36,000	239,700
1985	28,000	5,500	36,000	65,000	5,500	17,000	157,000
1986	60,000	15,300	47,000	76,000	39,000	27,000	264,300
1987	52,000	12,200	133,000	88,400	45,900	32,500	364,000
1988	54,000	71,000	83,700	106,500	2,300	26,500	344,000
1989	19,300	21,000	64,000	133,000	1,000	7,500	245,800
1990	32,600	7,400	35,900	49,800	2,200	18,000	145,900
1991	14,600	19,500	48,000	ND	2,000	13,000	97,100
1992	ND	ND	ND	392,000	ND	ND	392,000
1993	40,900	12,600	97,600	8,000	77,000	18,200	254,300
1994	70,000	25,000	125,000	350,000	20,000	51,000	641,000
1995	23,000	10,000	60,000	200,000	40,000	60,000	393,000
1996	40,000	24,000	51,000	100,000	50,000	45,000	310,000
1997	60,000	5,000	48,000	166,000	8,000	20,000	307,000
1998	90,000	14,000	100,000	50,000	9,000	62,000	325,000
1999	70,000	8,100	50,000	226,000	1,000	22,000	377,100
2000	41,000	29,000	126,000	210,000	26,000	93,000	525,000
2001	77,000	19,000	265,000	207,000	4,000	89,000	661,000
2002	43,000	ND	20,000	21,000	11,000	7,000	102,000
2003	17,600	400	2,500	188,000	ND	1,000	209,500
2004	4,290	1,490	15,560	137,700	200	ND	159,240
2005	4,300	ND	ND	ND	7,700	ND	12,000
Averages							
1985-04	44,068	16,694	74,119	146,021	19,117	33,872	313,712
1995-04	46,589	12,332	73,806	150,570	16,578	44,333	336,884
2000-04	36,578	12,473	85,812	152,740	10,300	47,500	331,348

Table 12.-Chignik Lake and Black River peak sockeye salmon aerial survey escapement estimates, 1960 through 2005.

	Black River				Chignik Lake			
Year	Bearskin Creek	West Fork	Chiaktuak Creek	Total	Clark River	Home Creek	Hatchery Beach	Total
1960	11,600	23,000	19,000	53,600	ND	ND	ND	-
1961	2,500	17,100	20,700	40,300	ND	ND	ND	-
1962	3,000	13,000	24,000	40,000	ND	ND	ND	-
1963	900	5,000	9,000	14,900	ND	ND	ND	-
1964	500	4,500	7,000	12,000	ND	ND	ND	-
1967	10,000	25,000	31,000	66,000	ND	ND	ND	-
1968	1,200	10,500	10,000	21,700	ND	ND	ND	-
1969	50	800	1,500	2,350	ND	ND	ND	-
1970	450	4,000	4,000	8,450	ND	ND	ND	-
1971	3,500	5,500	47,000	56,000	ND	ND	ND	-
1972	1,400	4,300	23,000	28,700	ND	ND	ND	-
1973	13	4,100	1,500	5,613	ND	ND	ND	-
1974	450	8,000	7,000	15,450	ND	ND	ND	-
1975	65	2,500	2,500	5,065	ND	ND	ND	-
1976	2,650	23,700	7,700	34,050	ND	ND	ND	-
1977	200	13,600	6,900	20,700	ND	ND	ND	-
1978	410	9,600	8,500	18,510	ND	ND	ND	-
1979	918	7,610	29,000	37,528	ND	ND	ND	-
1980	3,600	33,000	40,400	77,000	ND	ND	ND	-
1981	950	1,500	18,700	21,150	ND	ND	ND	-
1982	1,066	10,791	5,000	16,857	ND	ND	ND	-
1983	ND	ND	6,000	6,000	ND	ND	ND	-
1984	ND	ND	ND	8,200	ND	ND	ND	-
1985	350	450	1,200	2,000	ND	ND	ND	-
1986	ND	ND	8,300	8,300	ND	ND	ND	-
1987	ND	ND	1,000	1,000	ND	ND	ND	-
1988	ND	ND	4,600	4,600	ND	ND	ND	-
1989	ND	ND	2,100	2,100	ND	ND	ND	-
1990	300	0	50	350	ND	ND	ND	-
1991	ND	ND	ND	ND	ND	ND	ND	-
1992	ND	ND	ND	ND	ND	ND	ND	-
1993	ND	ND	16,000	16,000	ND	ND	ND	-
1994	5,000	ND	31,000	36,000	18,000	9,200	ND	27,200
1995	7,100	18,000	31,000	56,100	13,000	6,000	150,000	169,000
1996	1,800	22,000	22,000	45,800	13,000	5,500	70,000	88,500
1997	9,000	9,000	23,500	41,500	25,000	8,000	35,000	68,000
1998	4,700	71,000	27,500	103,200	21,000	6,000	62,000	89,000
1999	8,300	17,500	13,000	38,800	8,500	1,620	15,000	25,120
2000	2,600	3,700	10,600	16,900	18,000	19,700	2,000	39,700
2001	ND	ND	9,500	9,500	23,000	11,000	25,000	59,000
2002	ND	15,000	2,300	17,300	ND	ND	ND	-
2003	ND	ND	2,000	2000	ND	ND	ND	-
2004	100	600	750	1,450	2,500	2,000	ND	4,500
2005	900	900	5,100	6,900	ND	ND	ND	-
Averages								
1985-04	3,925	15,725	11,467	22,758	15,778	7,669	51,286	63,336
1995-04	4,800	19,600	14,215	36,710	15,500	7,478	51,286	67,853
2000-04	1,350	6,433	7,480	9,430	14,500	10,900	13,500	34,400

Table 13.-Estimated pink salmon escapement and objectives in the Chignik Management Area, by district and year, 1970 through 2005.

	District					
Year[a]	Chignik Bay[b]	Central[b]	Eastern[b]	Western[b]	Perryville[b]	Total[b]
1960	ND	28,000	130,000	48,600	123,800	330,400
1961	ND	4,650	9,500	60,100	34,750	109,000
1962	30,000	83,900	401,700	242,000	155,500	913,100
1963	20,700	92,600	126,200	305,000	162,000	706,500
1964	20,000	131,100	605,700	165,000	72,000	993,800
1965	11,000	65,800	64,800	152,000	82,000	375,600
1966	71,300	62,600	302,200	179,300	90,000	705,400
1967	5,700	18,500	56,100	104,400	155,300	340,000
1968	81,400	66,100	390,300	151,300	128,700	817,800
1969	11,700	69,600	46,000	422,000	218,600	767,900
1970	43,600	60,700	201,700	202,000	72,600	580,600
1971	5,500	74,800	23,000	268,800	45,000	417,100
1972	5,800	3,100	15,900	8,600	7,800	41,200
1973	2,200	50,200	12,800	62,400	31,500	159,100
1974	4,000	9,800	76,200	77,400	60,200	227,600
1975	1,200	26,400	23,500	141,700	45,300	238,100
1976	12,300	66,000	228,800	114,200	89,300	510,600
1977	3,000	199,900	76,000	355,500	115,400	749,800
1978	10,700	101,200	309,300	333,400	157,500	912,100
1979	1,200	297,000	194,300	185,000	181,300	858,800
1980	3,000	99,400	425,500	139,500	74,800	742,200
1981	1,400	76,500	154,700	249,300	116,000	597,900
1982	2,400	26,100	301,500	45,900	13,400	389,300
1983	1,000	11,000	46,300	36,000	64,500	158,800
1984	123,200	94,000	486,500	188,000	109,800	1,001,500
1985	ND	7,400	212,100	67,500	235,200	522,200
1986	ND	121,900	580,700	43,800	180,500	926,900
1987	ND	65,700	215,600	38,300	65,700	385,300
1988	22,400	216,400	1,005,400	232,400	181,300	1,657,900
1989	13,500	215,000	881,000	57,900	267,400	1,434,800
1990	6,000	131,900	811,400	44,300	88,400	1,082,000
1991	12,200	201,100	125,000	96,800	343,500	778,600
1992	55,800	223,800	1,318,100	38,800	190,400	1,826,900
1993	2,000	160,900	524,700	45,800	448,400	1,181,800
1994	75,800	178,900	863,300	111,600	153,900	1,383,500
1995	180,500	715,500	1,399,300	554,700	582,100	3,432,100
1996	43,100	237,100	1,059,600	220,800	395,700	1,956,300
1997	59,400	594,600	1,287,700	306,300	221,500	2,469,500
1998	24,400	210,900	1,273,200	150,400	222,800	1,881,700
1999	37,300	374,300	615,100	137,900	179,700	1,344,300

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Table 13.-Page 2 of 2.

Year[a]	District					Total[b]
	Chignik Bay[b]	Central[b]	Eastern[b]	Western[b]	Perryville[b]	
2000	27,400	146,100	810,700	130,100	98,700	1,213,000
2001	19,700	460,400	1,470,200	263,000	150,200	2,363,500
2002	16,917	85,755	777,710	85,501	62,170	1,028,053
2003	143,897	576,510	1,408,060	117,650	99,500	2,345,617
2004	27,300	257,000	601,900	94,340	134,320	1,114,860
2005	160,000	473,400	512,350	257,500	188,600	1,591,850
Management Objective	8,000 to 17,000	87,000 to 197,000	267,000 to 601,000	65,000 to 141,000	105,000 to 228,000	541,000 to 1,177,000
Averages						
1985-04	45,154	259,058	862,039	141,895	215,070	1,516,442
1995-04	57,991	365,817	1,070,347	206,069	214,669	1,914,893
2000-04	47,043	305,153	1,013,714	138,118	108,978	1,613,006

[a] From 1984 to 2003 aerial survey escapement estimates were computed by area-under-the-curve methods using a 15.0 day average stream life (Johnson and Barrett 1988). Starting 2004, estimates were computed using peak counts (Witteveen et al. 2005).

[b] All estimates were via aerial survey, with the exception of the Chignik River weir count which was included in the Chignik Bay District estimate.

Table 14.-Estimated chum salmon escapement and objectives in the Chignik Management Area, by district and year, 1970 through 2005.

	District					
Year[a]	Chignik Bay[b]	Central[b]	Eastern[b]	Western[b]	Perryville[b]	Total[b]
1970	21,000	23,400	126,000	49,700	13,000	233,100
1971	7,100	29,100	219,200	184,100	30,000	469,500
1972	3,300	14,200	107,400	59,000	11,500	195,400
1973	700	12,200	59,100	35,600	9,300	116,900
1974	2,100	18,100	76,300	39,400	12,500	148,400
1975	2,100	18,800	41,300	43,400	20,500	126,100
1976	2,400	17,800	122,300	55,000	8,900	206,400
1977	2,000	9,300	54,500	70,400	15,400	151,600
1978	2,100	13,800	55,800	27,300	5,300	104,300
1979	1,600	44,800	79,500	42,500	12,800	181,200
1980	300	34,200	107,000	56,500	29,100	227,100
1981	500	26,100	126,000	70,300	19,300	242,200
1982	1,400	49,400	145,400	35,400	23,600	255,200
1983	100	17,000	50,200	20,100	8,200	95,600
1984	300	35,400	214,700	73,800	46,000	370,200
1985	0	9,600	4,900	34,600	12,900	62,000
1986	0	31,000	8,500	5,300	7,700	52,500
1987	100	17,500	38,300	19,700	9,800	85,400
1988	15,300	55,800	221,900	27,400	41,400	361,800
1989	4,200	34,700	74,300	7,400	15,900	136,500
1990	1,500	28,000	139,700	28,800	55,800	253,800
1991	0	18,000	70,400	38,100	343,200	469,700
1992	100	173,100	306,900	53,300	40,300	573,700
1993	300	39,400	135,200	14,000	66,800	255,700
1994	1,500	102,600	129,200	23,000	126,000	382,300
1995	10,300	44,500	112,800	45,700	134,600	347,900
1996	16,400	45,100	130,500	44,500	132,000	368,500
1997	18,500	65,700	290,000	60,500	152,800	587,500
1998	4,500	32,000	97,700	30,600	214,500	379,300
1999	2,300	32,400	167,100	16,300	117,300	335,400
2000	100	22,700	216,000	12,700	51,900	303,400
2001	4,100	36,500	406,900	35,500	67,800	550,800
2002	67	11,615	174,850	17,082	32,020	235,634
2003	899	43,191	152,854	39,050	64,331	300,325
2004	376	30,310	277,240	3,100	38,492	349,518
2005	30,000	159,100	36,350	22,000	61,250	308,700
Management Objective	200	6,700	25,200	5,400	12,800	50,400
Averages						
1985-04	4,027	43,686	157,762	27,832	86,277	319,584
1995-04	5,754	36,402	202,594	30,503	100,574	375,828
2000-04	1,108	28,863	245,569	21,486	50,909	347,935

[a] From 1984 to 2003 aerial survey escapement estimates were computed by area-under-the-curve methods using a 15.0 day average stream life (Johnson and Barrett 1988). Starting 2004, estimates were computed using peak counts (Witteveen et al. 2005).

[b] All estimates were via aerial survey, with the exception of Chignik River which was included in the Chignik Bay District estimate.

Table 15.-Total commercial salmon harvests, including home pack and the department's test fishery harvests, from the Chignik Management Area by species and year, 1970 through 2005.

	Permits Making		Chignik Management Area Harvest					
Year	Deliveries	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	80	2,343	1,226	1,325,734	15,348	1,157,172	437,252	2,936,732
1971	77	2,383	2,010	1,016,136	14,557	612,290	353,952	1,998,945
1972	80	1,626	464	378,218	19,615	72,161	78,298	548,756
1973	80	2,187	525	870,354	22,322	25,472	8,717	927,390
1974	94	2,286	255	662,905	12,245	69,515	34,312	779,232
1975	86	1,844	549	399,593	53,283	66,165	25,161	544,751
1976	77	2,407	2,290	1,163,728	35,167	395,287	81,403	1,677,875
1977	88	2,426	710	1,972,207	17,430	604,806	110,452	2,705,605
1978	95	3,005	1,603	1,576,283	20,212	985,114	120,889	2,704,101
1979	103	3,009	1,253	1,049,691	99,129	1,905,198	188,907	3,244,178
1980	104	3,134	2,344	859,966	119,573	1,093,184	252,521	2,327,588
1981	105	4,222	2,694	1,839,469	78,805	1,162,613	580,332	3,663,913
1982	103	3,606	5,236	1,521,686	300,273	873,384	390,096	3,090,675
1983	102	4,357	5,488	1,824,175	61,927	321,178	159,412	2,372,180
1984	100	3,927	4,318	2,660,619	110,128	444,804	63,303	3,283,172
1985	107	3,392	1,887	921,502	191,162	160,128	22,805	1,297,484
1986	102	4,178	3,037	1,645,834	116,633	647,125	176,640	2,589,269
1987	104	3,856	2,651	1,898,838	150,414	246,775	127,261	2,425,939
1988	102	3,895	7,296	795,841	370,420	2,997,159	267,775	4,438,491
1989	101	3,183	3,542	1,159,287	68,233	27,712	1,624	1,260,398
1990	102	5,405	9,901	2,093,650	130,131	550,008	270,004	3,053,694
1991	103	3,856	3,157	1,895,665	165,625	1,169,248	261,096	3,494,791
1992	102	4,172	10,832	1,277,449	310,943	1,554,073	222,134	3,375,431
1993	103	4,241	19,515	1,697,351	229,459	1,648,377	122,360	3,717,062
1994	100	3,707	3,919	1,618,973	237,204	431,063	227,276	2,518,435
1995	101	5,113	5,493	1,724,045	281,518	2,057,998	380,954	4,450,008
1996	101	4,565	3,145	1,958,393	193,246	189,068	120,891	2,464,743
1997	100	3,394	3,120	770,347	90,908	844,431	155,905	1,864,711
1998	86	3,348	4,503	1,054,439	129,539	776,988	128,996	2,094,465
1999	91	4,382	3,507	3,116,527	89,610	1,698,651	140,597	5,048,892
2000	100	3,268	2,612	1,775,225	123,222	428,064	120,957	2,450,080
2001	93	2,906	2,939	1,511,587	131,448	1,281,767	199,003	3,126,744
2002	42	2,432	1,521	1,050,553	49,372	66,050	54,559	1,222,055
2003	44	2,073	3,068	1,100,297	103,896	502,638	64,044	1,773,943
2004	33	1,346	2,520	704,652	37	2,380	505	711,473
2005	97	1,669	3,408	1,152,133	6,956	194,045	8,821	1,365,363
Averages								
1985-04	91	3,636	4,908	1,488,523	158,151	863,985	153,269	2,668,905
1995-04	79	3,283	3,243	1,476,607	119,280	784,804	136,641	2,520,711
2000-04	62	2,405	2,532	1,228,463	81,595	456,180	87,814	1,856,859

Table 16.-Annual Chignik Management Area Chinook salmon harvest, 1970 through 2005.

	Testfish		Commercial Catch		Home Pack		Total	
Year	Number	Pounds	Number	Pounds	Number	Pounds[a]	Number	Pounds
1970	ND	ND	1,226	28,507	ND	ND	1,226	28,507
1971	ND	ND	2,010	25,887	ND	ND	2,010	25,887
1972	ND	ND	464	8,091	ND	ND	464	8,091
1973	ND	ND	525	17,001	ND	ND	525	17,001
1974	ND	ND	255	5,997	ND	ND	255	5,997
1975	ND	ND	549	14,108	ND	ND	549	14,108
1976	ND	ND	2,290	29,229	ND	ND	2,290	29,229
1977	ND	ND	710	21,176	ND	ND	710	21,176
1978	ND	ND	1,603	42,439	ND	ND	1,603	42,439
1979	ND	ND	1,253	18,998	ND	ND	1,253	18,998
1980	ND	ND	2,344	32,255	ND	ND	2,344	32,255
1981	ND	ND	2,694	50,832	ND	ND	2,694	50,832
1982	ND	ND	5,236	59,753	ND	ND	5,236	59,753
1983	ND	ND	5,488	96,159	ND	ND	5,488	96,159
1984	ND	ND	4,318	99,567	ND	ND	4,318	99,567
1985	10	249	1,877	44,625	ND	ND	1,887	44,874
1986	ND	ND	3,037	66,772	ND	ND	3,037	66,772
1987	0	0	2,651	49,482	ND	ND	2,651	49,482
1988	0	0	7,296	128,880	ND	ND	7,296	128,880
1989	0	0	3,542	76,698	ND	ND	3,542	76,698
1990	0	0	9,901	134,265	ND	ND	9,901	134,265
1991	3	37	3,154	66,666	ND	ND	3,157	66,703
1992	2	8	10,830	138,082	ND	ND	10,832	138,090
1993	14	65	19,501	234,188	ND	ND	19,515	234,253
1994	16	245	3,903	71,620	ND	ND	3,919	71,865
1995	0	0	5,261	111,187	232	4,903	5,493	116,090
1996	0	0	3,105	62,603	40	806	3,145	63,409
1997	7	149	3,025	47,075	88	1,369	3,120	48,593
1998	21	450	4,374	66,080	108	1,632	4,503	68,162
1999	0	0	3,296	56,706	211	3,630	3,507	60,336
2000	0	0	2,592	34,757	20	268	2,612	35,025
2001	4	120	2,845	39,252	90	1,242	2,939	40,614
2002	3	25	1,441	13,725	77	733	1,521	14,483
2003	2	13	2,757	39,716	309	4,451	3,068	43,722
2004	4	57	2,337	43,652	179	3,343	2,520	47,020
2005	1	23	3,137	55,638	271	6,157	3,408	61,795
Averages								
1985-04	5	75	4,836	76,302	135	2,238	4,908	77,467
1995-04	4	81	3,103	51,475	135	2,238	3,243	53,745
2000-04	3	43	2,394	34,220	135	2,007	2,532	36,173

[a] Weights of home pack fish are not reported on fish tickets; therefore, they were calculated from the average weight of the commercial harvest.

Table 17.-Chignik Management Area Chinook salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2005.

	District					
Year	Chignik Bay	Central	Eastern	Western	Perryville	Total
1970	867	5	55	230	69	1,226
1971	656	23	134	266	931	2,010
1972	226	0	24	72	142	464
1973	520	0	5	0	0	525
1974	200	27	0	28	0	255
1975	542	7	0	0	0	549
1976	2,135	15	3	60	77	2,290
1977	692	12	0	1	5	710
1978	1,386	49	19	130	19	1,603
1979	856	101	6	181	109	1,253
1980	929	148	169	739	359	2,344
1981	2,006	302	188	99	99	2,694
1982	3,269	41	38	1,354	534	5,236
1983	3,560	161	260	1,390	117	5,488
1984	3,696	63	72	487	0	4,318
1985	1,809	50	7	21	0	1,887
1986	2,592	58	14	350	23	3,037
1987	1,931	60	6	512	142	2,651
1988	4,331	1,094	190	1,216	465	7,296
1989	3,532	9	1	0	0	3,542
1990	3,719	2,175	175	3,190	642	9,901
1991	1,996	775	165	197	24	3,157
1992	3,181	2,010	181	4,300	1,160	10,832
1993	5,240	6,865	2,568	3,113	1,729	19,515
1994	1,808	1,303	43	452	313	3,919
1995	3,219	845	108	897	424	5,493
1996	1,590	1,022	263	162	108	3,145
1997	1,384	1,609	60	60	7	3,120
1998	1,805	1,798	79	567	254	4,503
1999	2,270	852	147	216	22	3,507
2000	598	530	53	1,421	10	2,612
2001	1,235	770	302	627	5	2,939
2002	920	17	0	584	0	1,521
2003	2,834	189	0	45	0	3,068
2004	2,520	0	0	0	0	2,520
2005	2,714	391	0	297	6	3,408
Averages						
1985-04	2,426	1,102	218	897	266	4,908
1995-04	1,838	763	101	458	83	3,243
2000-04	1,621	301	71	535	3	2,532

Table 18.-Chignik Management Area Chinook salmon harvest (including home pack and the department's test fishery catches), by district and day, 2005.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
6/5	0	0	0	Closed	Closed	0
6/6	1	0	0	Closed	Closed	1
6/7	1	0	0	Closed	Closed	1
6/8	0	0	0	Closed	Closed	0
6/9	0	0	0	Closed	Closed	0
6/10	0	5	0	Closed	Closed	5
6/11	0	0	0	Closed	Closed	0
6/12	2	0	0	Closed	Closed	2
6/13	3	0	0	Closed	Closed	3
6/14	0	0	0	Closed	Closed	0
6/15	6	8	0	Closed	Closed	14
6/16	9	15	0	Closed	Closed	24
6/17	6	0	0	Closed	Closed	6
6/18	2	0	0	Closed	Closed	2
6/19	9	0	0	Closed	Closed	9
6/20	6	0	0	Closed	Closed	6
6/21	29	0	0	Closed	Closed	29
6/22	6	0	0	Closed	Closed	6
6/23	2	0	0	Closed	Closed	2
6/24	13	32	0	Closed	Closed	45
6/25	2	8	0	Closed	Closed	10
6/26	Closed	Closed	Closed	Closed	Closed	0
6/27	Closed	Closed	Closed	Closed	Closed	0
6/28	9	0	0	Closed	Closed	9
6/29	156	0	0	Closed	Closed	156
6/30	207	0	0	Closed	Closed	207
7/1	143	0	0	Closed	Closed	143
7/2	339	0	0	Closed	Closed	339
7/3	4	0	0	Closed	Closed	4
7/4	118	14	0	Closed	Closed	132
7/5	35	294	Closed	Closed	Closed	329
7/6	99	0	Closed	75	6	180
7/7	90	0	Closed	31	0	121
7/8	124	0	Closed	191	0	315
7/9	98	0	Closed	Closed	Closed	98
7/10	116	0	Closed	Closed	Closed	116
7/11	132	0	Closed	Closed	Closed	132
7/12	41	0	Closed	Closed	Closed	41
7/13	183	0	Closed	Closed	Closed	183
7/14	90	0	Closed	Closed	Closed	90
7/15	95	6	Closed	0	0	101
7/16	40	4	Closed	0	0	44
7/17	0	0	Closed	0	0	0
7/18	180	0	Closed	Closed	Closed	180

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Table 18.-Page 2 of 2.

Date	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
7/19	93	0	Closed	Closed	Closed	93
7/20	6	0	Closed	Closed	Closed	6
7/21	17	0	Closed	Closed	Closed	17
7/22	18	0	Closed	Closed	Closed	18
7/23	19	0	Closed	Closed	Closed	19
7/24	17	0	0	Closed	Closed	17
7/25	7	5	Closed	Closed	Closed	12
7/26	1	0	Closed	Closed	Closed	1
7/27	25	0	Closed	Closed	Closed	25
7/28	13	0	Closed	Closed	Closed	13
7/29	41	0	0	Closed	Closed	41
7/30	7	0	0	Closed	Closed	7
7/31	46	0	0	Closed	Closed	46
8/1	2	0	0	Closed	Closed	2
8/2	6	0	Closed	Closed	Closed	6
8/3	Closed	Closed	Closed	Closed	Closed	0
8/4	0	0	Closed	Closed	Closed	0
8/5	0	0	Closed	Closed	Closed	0
8/6	0	0	Closed	Closed	Closed	0
8/7	Closed	Closed	Closed	Closed	Closed	0
8/8	Closed	Closed	Closed	Closed	Closed	0
8/9	Closed	Closed	Closed	Closed	Closed	0
8/10	Closed	Closed	Closed	Closed	Closed	0
8/11	Closed	Closed	Closed	Closed	Closed	0
8/12	Closed	Closed	Closed	Closed	Closed	0
8/13	Closed	Closed	Closed	Closed	Closed	0
8/14	Closed	Closed	Closed	Closed	Closed	0
8/15	Closed	Closed	0	Closed	Closed	0
8/16	Closed	Closed	Closed	Closed	Closed	0
8/17	Closed	Closed	Closed	Closed	Closed	0
8/18	Closed	Closed	Closed	Closed	Closed	0
8/19	Closed	Closed	Closed	Closed	Closed	0
8/20	Closed	Closed	Closed	Closed	Closed	0
Total	2,714	391	0	297	6	3,408

Table 19.-Total harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries, 1978 through 2005.

	Testfish		Commercial Catch		Home Pack		Total CMA Harvest		Cape Igvak[a]		SEDM[b]		Total Chignik-bound	
Year	Number	Pounds	Number	Pounds	Number	Pounds[c]	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1970	ND	ND	1,325,734	9,210,127	ND	ND	1,325,734	9,210,127	ND	ND	ND	ND	1,325,734	9,210,127
1971	ND	ND	1,016,136	7,534,367	ND	ND	1,016,136	7,534,367	ND	ND	ND	ND	1,016,136	7,534,367
1972	ND	ND	378,218	2,863,742	ND	ND	378,218	2,863,742	ND	ND	ND	ND	378,218	2,863,742
1973	ND	ND	870,354	7,023,294	ND	ND	870,354	7,023,294	ND	ND	ND	ND	870,354	7,023,294
1974	ND	ND	662,905	4,756,653	ND	ND	662,905	4,756,653	ND	ND	ND	ND	662,905	4,756,653
1975	ND	ND	399,593	2,773,725	ND	ND	399,593	2,773,725	ND	ND	ND	ND	399,593	2,773,725
1976	ND	ND	1,163,728	8,562,989	ND	ND	1,163,728	8,562,989	ND	ND	ND	ND	1,163,728	8,562,989
1977	ND	ND	1,972,207	17,247,659	ND	ND	1,972,207	17,247,659	ND	ND	ND	ND	1,972,207	17,247,659
1978	ND	ND	1,576,283	12,451,982	ND	ND	1,576,283	12,451,982	225,078	1,583,809	ND	ND	1,801,361	14,035,791
1979	ND	ND	1,049,691	7,862,600	ND	ND	1,049,691	7,862,600	13,950	96,507	ND	ND	1,063,641	7,959,107
1980	ND	ND	859,966	5,795,098	ND	ND	859,966	5,795,098	32	147	63,724	442,601	923,722	6,237,846
1981	ND	ND	1,839,469	13,486,031	ND	ND	1,839,469	13,486,031	282,727	1,876,246	122,198	888,410	2,244,394	16,250,687
1982	ND	ND	1,521,686	11,340,439	ND	ND	1,521,686	11,340,439	166,756	1,162,053	62,789	463,729	1,751,231	12,966,221
1983	ND	ND	1,824,175	11,926,829	ND	ND	1,824,175	11,926,829	318,048	1,926,770	227,392	1,631,668	2,369,615	15,485,267
1984	ND	ND	2,660,619	18,536,287	ND	ND	2,660,619	18,536,287	449,372	2,820,646	423,292	3,053,430	3,533,283	24,410,363
1985	4,875	30,480	916,627	5,415,817	ND	ND	921,502	5,446,297	123,627	637,207	51,421	337,919	1,096,550	6,421,423
1986	ND	ND	1,645,834	11,254,860	ND	ND	1,645,834	11,254,860	188,017	1,153,092	118,006	841,446	1,951,857	13,249,398
1987	679	4,637	1,898,159	13,997,077	ND	ND	1,898,838	14,001,714	321,506	2,146,841	146,886	1,121,094	2,367,230	17,269,649
1988	3,425	24,287	792,416	5,690,165	ND	ND	795,841	5,714,452	10,520	63,641	19,320	140,708	825,681	5,918,801
1989	6,433	46,532	1,152,854	7,922,748	ND	ND	1,159,287	7,969,280	0	0	4,485	32,262	1,163,772	8,001,542
1990	5,522	33,915	2,088,128	13,775,854	ND	ND	2,093,650	13,809,769	107,706	665,309	117,065	783,670	2,318,421	15,258,748
1991	8,106	54,892	1,887,559	12,889,560	ND	ND	1,895,665	12,944,452	324,195	1,886,494	152,714	1,037,726	2,372,574	15,868,672
1992	12,423	80,326	1,265,026	8,292,576	ND	ND	1,277,449	8,372,902	150,434	896,108	93,845	608,765	1,521,728	9,877,775
1993	5,444	34,231	1,691,907	10,228,401	ND	ND	1,697,351	10,262,632	300,055	1,639,082	128,608	847,879	2,126,014	12,749,593
1994	9,139	54,433	1,609,834	10,091,402	ND	ND	1,618,973	10,145,835	250,230	1,423,150	142,350	934,493	2,011,553	12,503,478
1995	9,023	57,674	1,715,022	11,464,647	0	0	1,724,045	11,522,321	169,530	899,572	89,086	547,563	1,982,661	12,969,456
1996	4,317	36,511	1,954,036	14,866,234	40	304	1,958,393	14,903,049	308,327	1,954,430	127,201	884,305	2,393,921	17,741,784
1997	11,299	77,874	758,384	4,782,715	664	4,187	770,347	4,864,776	0	0	0	0	770,347	4,864,776
1998	12,374	66,040	1,041,798	6,372,010	267	1,633	1,054,439	6,439,683	8,813	39,133	66,893	408,902	1,130,145	6,887,718
1999	5,994	42,216	3,110,507	20,527,837	26	172	3,116,527	20,570,225	456,039	2,469,213	173,621	1,086,186	3,746,187	24,125,624
2000	11,604	88,790	1,763,621	13,577,434	0	0	1,775,225	13,666,224	271,344	1,703,875	103,419	737,462	2,149,988	16,107,561

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	Testfish		Commercial Catch		Home Pack		Total CMA Harvest		Cape Igvak[a]		SEDM[b]		Total Chignik-bound	
Year	Number	Pounds	Number	Pounds	Number	Pounds[c]	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
2001[d]	14,011	98,197	1,497,359	10,972,234	217	1,590	1,511,587	11,072,021	215,214	1,287,154	51,141	368,970	1,777,942	12,728,145
2002	9,101	61,656	1,040,081	7,176,261	1,371	9,460	1,050,553	7,247,377	136,488	727,894	63,026	502,353	1,250,067	8,477,624
2003	5,582	36,334	1,092,304	7,137,591	2,411	15,755	1,100,297	7,189,680	121,887	599,342	70,044	466,153	1,292,228	8,255,175
2004	5,919	38,317	697,043	4,460,437	1,690	10,998	704,652	4,509,752	160,665	781,265	55,123	355,703	920,440	5,291,017
2005	7,076	43,988	1,143,693	7,468,609	1,364	8,702	1,152,133	7,521,299	274,328	1,681,630	170,662	1,088,207	1,597,123	10,291,136
Averages														
1985-04	7,646	50,913	1,480,925	10,044,793	-	-	1,488,523	10,095,365	181,230	1,048,640	88,713	602,178	1,758,465	11,728,398
1995-04	8,922	60,361	1,467,016	10,133,740	669	4,410	1,476,607	10,198,511	184,831	1,046,188	79,955	535,760	1,741,393	11,744,888
2000-04	9,243	64,659	1,218,082	8,664,791	1,138	7,561	1,228,463	8,737,011	181,120	1,019,906	68,551	486,128	1,478,133	10,171,904

[a] The Cape Igvak allocation began in 1978. From 1978 to 2002, 80% of the Cape Igvak sockeye salmon harvest was considered Chignik River-bound. Beginning in 2002, that percentage was changed to 90%.

[b] Beginning in 1985, 80% of the SEDM harvest in specific areas during specific times was considered Chignik River-bound.

[c] Weights of home pack fish are not reported on fish tickets; therefore, the weights were calculated from the average weight of the commercial harvest for that year.

[d] Due to a strike by Alaska Peninsula fishermen, forgone harvest of 27,896 sockeye salmon was added to the SEDM catch for management purposes; this forgone harvest is not included in this table.

Table 20.-Total annual Chignik Management Area sockeye salmon harvest (including home pack and the department's test fishery catches), by district, 1970 through 2005.

	District					
Year	Chignik Bay	Central	Eastern	Western	Perryville	Total
1970	1,122,993	10,252	187,210	3,751	1,528	1,325,734
1971	885,632	41,958	81,155	6,403	988	1,016,136
1972	354,912	2,429	15,985	4,734	158	378,218
1973	845,079	8,039	17,234	2	0	870,354
1974	539,196	120,412	199	3,098	0	662,905
1975	387,128	12,448	0	17	0	399,593
1976	1,112,533	48,327	1,254	425	1,189	1,163,728
1977	1,851,733	119,484	0	909	81	1,972,207
1978	1,474,673	89,826	7,161	4,482	141	1,576,283
1979	909,056	104,892	12,558	20,319	2,866	1,049,691
1980	708,828	74,628	60,947	9,227	6,336	859,966
1981	1,355,524	426,159	36,618	14,751	6,417	1,839,469
1982	1,413,806	66,278	10,209	30,279	1,114	1,521,686
1983	1,597,059	123,590	73,824	25,246	4,456	1,824,175
1984	1,942,822	517,653	184,495	15,470	179	2,660,619
1985	811,956	77,314	18,720	13,175	337	921,502
1986	1,389,172	182,884	6,424	44,362	22,992	1,645,834
1987	1,559,757	255,118	14,498	56,524	12,941	1,898,838
1988	529,540	124,103	25,699	93,070	23,429	795,841
1989	1,156,782	2,473	32	0	0	1,159,287
1990	1,400,069	566,601	51,443	53,192	22,345	2,093,650
1991	1,487,421	315,570	59,751	19,766	13,157	1,895,665
1992	792,889	332,860	12,327	30,004	109,369	1,277,449
1993	762,730	557,020	186,364	54,051	137,186	1,697,351
1994	908,042	573,484	20,041	64,325	53,081	1,618,973
1995	1,083,707	415,436	48,842	79,874	96,186	1,724,045
1996	1,003,683	743,658	145,668	47,529	17,855	1,958,393
1997	407,427	295,084	20,650	44,768	2,418	770,347
1998	622,005	286,643	30,555	87,940	27,296	1,054,439
1999	2,356,146	612,589	79,717	57,859	10,216	3,116,527
2000	1,327,249	358,985	71,572	15,034	2,385	1,775,225
2001	1,082,291	382,172	28,377	17,673	1,074	1,511,587
2002	993,756	44,368	2,835	9,425	169	1,050,553
2003	1,000,247	64,440	1,701	29,069	4,840	1,100,297
2004	704,471	181	0	0	0	704,652
2005	1,039,076	84,879	2	27,927	249	1,152,133
Averages						
1985-04	1,068,967	309,549	41,261	40,882	27,864	1,488,523
1995-04	1,058,098	320,356	42,992	38,917	16,244	1,476,607
2000-04	1,021,603	170,029	20,897	14,240	1,694	1,228,463

Table 21.-Chignik Management Area sockeye salmon harvest (including home pack and the department's test fishery catches), by district and day, 2005.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
6/3	876	Closed	Closed	Closed	Closed	876
6/4	Closed	Closed	Closed	Closed	Closed	0
6/5	5,895	0	0	Closed	Closed	5,895
6/6	22,116	0	0	Closed	Closed	22,116
6/7	20,844	0	0	Closed	Closed	20,844
6/8	24,920	0	0	Closed	Closed	24,920
6/9	47,054	0	0	Closed	Closed	47,054
6/10	44,750	15,010	0	Closed	Closed	59,760
6/11	41,870	9,914	0	Closed	Closed	51,784
6/12	43,136	0	0	Closed	Closed	43,136
6/13	52,182	0	0	Closed	Closed	52,182
6/14	73,934	0	0	Closed	Closed	73,934
6/15	51,387	5,427	0	Closed	Closed	56,814
6/16	44,847	8,680	0	Closed	Closed	53,527
6/17	21,031	0	0	Closed	Closed	21,031
6/18	20,366	0	0	Closed	Closed	20,366
6/19	23,449	0	0	Closed	Closed	23,449
6/20	39,346	0	0	Closed	Closed	39,346
6/21	27,073	0	0	Closed	Closed	27,073
6/22	12,102	0	0	Closed	Closed	12,102
6/23	6,267	0	0	Closed	Closed	6,267
6/24	19,251	5,470	0	Closed	Closed	24,721
6/25	5,735	1,594	0	Closed	Closed	7,329
6/26	Closed	Closed	Closed	Closed	Closed	0
6/27	Closed	Closed	Closed	Closed	Closed	0
6/28	6,805	0	0	Closed	Closed	6,805
6/29	10,115	0	0	Closed	Closed	10,115
6/30	13,165	0	0	Closed	Closed	13,165
7/1	11,261	0	0	Closed	Closed	11,261
7/2	8,187	0	0	Closed	Closed	8,187
7/3	4,361	0	0	Closed	Closed	4,361
7/4	10,977	657	0	Closed	Closed	11,634
7/5	4,579	9,571	Closed	Closed	Closed	14,150
7/6	7,514	0	Closed	11,555	249	19,318
7/7	7,525	0	Closed	10,113	0	17,638
7/8	8,461	0	Closed	6,259	0	14,720
7/9	7,505	0	Closed	Closed	Closed	7,505
7/10	21,024	0	Closed	Closed	Closed	21,024
7/11	14,392	0	Closed	Closed	Closed	14,392
7/12	9,308	0	Closed	Closed	Closed	9,308
7/13	27,769	0	Closed	Closed	Closed	27,769
7/14	27,650	0	Closed	Closed	Closed	27,650
7/15	17,334	13,101	Closed	0	0	30,435
7/16	17,119	10,844	Closed	0	0	27,963
7/17	1,622	0	Closed	0	0	1,622
7/18	30,434	0	Closed	Closed	Closed	30,434

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	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
7/19	17,731	0	Closed	Closed	Closed	17,731
7/20	8,884	0	Closed	Closed	Closed	8,884
7/21	12,727	0	Closed	Closed	Closed	12,727
7/22	11,148	0	Closed	Closed	Closed	11,148
7/23	10,436	0	Closed	Closed	Closed	10,436
7/24	11,198	0	0	Closed	Closed	11,198
7/25	7,221	3,442	Closed	Closed	Closed	10,663
7/26	5,434	0	Closed	Closed	Closed	5,434
7/27	5,599	0	Closed	Closed	Closed	5,599
7/28	4,944	0	Closed	Closed	Closed	4,944
7/29	9,700	0	0	Closed	Closed	9,700
7/30	8,082	0	0	Closed	Closed	8,082
7/31	4,903	0	0	Closed	Closed	4,903
8/1	1,437	0	0	Closed	Closed	1,437
8/2	3,257	1,169	Closed	Closed	Closed	4,426
8/3	Closed	Closed	Closed	Closed	Closed	0
8/4	0	0	Closed	Closed	Closed	0
8/5	0	0	Closed	Closed	Closed	0
8/6	837	0	Closed	Closed	Closed	837
8/7	Closed	Closed	Closed	Closed	Closed	0
8/8	Closed	Closed	Closed	Closed	Closed	0
8/9	Closed	Closed	Closed	Closed	Closed	0
8/10	Closed	Closed	Closed	Closed	Closed	0
8/11	Closed	Closed	Closed	Closed	Closed	0
8/12	Closed	Closed	Closed	Closed	Closed	0
8/13	Closed	Closed	Closed	Closed	Closed	0
8/14	Closed	Closed	Closed	Closed	Closed	0
8/15	Closed	Closed	2	Closed	Closed	2
8/16	Closed	Closed	Closed	Closed	Closed	0
8/17	Closed	Closed	Closed	Closed	Closed	0
8/18	Closed	Closed	Closed	Closed	Closed	0
8/19	Closed	Closed	Closed	Closed	Closed	0
8/20	Closed	Closed	Closed	Closed	Closed	0
Total	1,039,076	84,879	2	27,927	249	1,152,133

Table 22.-Harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries from June 1 to July 25, 1978 through 2005.

	Chignik[a]		Cape Igvak[a]		Southeastern District Mainland[a]		
Year	Catch[b]	Percent	Catch[b]	Percent	Catch[c]	Percent	Total
1978	1,454,389	86.6	225,078	13.4	ND	ND	1,679,467
1979	794,504	98.3	13,950	1.7	ND	ND	808,454
1980	670,001	91.3	32	0.0	63,724	8.7	733,757
1981	1,606,300	79.9	282,727	14.1	122,198	6.1	2,011,225
1982	1,250,768	84.5	166,756	11.3	62,789	4.2	1,480,313
1983	1,450,832	72.7	318,048	15.9	227,392	11.4	1,996,272
1984	2,474,405	73.9	449,372	13.4	423,292	12.6	3,347,069
1985	690,698	79.8	123,627	14.3	51,421	5.9	865,746
1986	1,456,729	82.6	188,017	10.7	118,006	6.7	1,762,752
1987	1,659,236	78.0	321,506	15.1	146,886	6.9	2,127,628
1988	675,487	95.8	10,520	1.5	19,320	2.7	705,327
1989	496,044	99.1	0	0.0	4,485	0.9	500,529
1990	1,205,575	84.3	107,706	7.5	117,065	8.2	1,430,346
1991[d]	1,962,583	80.5	324,195	13.3	152,714	6.3	2,439,492
1992	1,054,309	81.2	150,434	11.6	93,845	7.2	1,298,588
1993	1,495,098	77.7	300,055	15.6	128,608	6.7	1,923,761
1994[e]	1,632,435	80.6	250,230	12.4	142,350	7.0	2,025,015
1995	1,024,785	79.8	169,530	13.2	89,086	6.9	1,283,401
1996	1,710,249	79.7	308,327	14.4	127,201	5.9	2,145,777
1997	443,892	100.0	0	0.0	0	0.0	443,892
1998[f]	786,466	91.2	8,813	1.0	66,893	7.8	862,172
1999	2,326,811	78.7	456,039	15.4	173,621	5.9	2,956,471
2000	1,509,652	80.1	271,344	14.4	103,419	5.5	1,884,415
2001[g]	1,134,991	79.4	215,214	15.1	79,037	5.5	1,429,242
2002	849,980	81.0	136,488	13.0	63,026	6.0	1,049,494
2003	855,179	81.7	121,887	11.6	70,044	6.7	1,047,110
2004	681,120	75.9	160,665	17.9	55,123	6.1	896,908
2005	1,152,133	72.1	274,328	17.2	170,662	10.7	1,597,123
Averages							
1985-04	1,182,566	82.8	181,230	10.9	90,108	6.3	1,453,903
1995-04	1,132,313	83.2	184,831	11.1	82,745	5.7	1,399,888
2000-04	1,006,184	80.2	181,120	13.9	74,130	5.9	1,261,434

[a] Through 2001, the Cape Igvak and Southeastern District Mainland figures represent 80% of the total sockeye salmon catch for those areas through July 25, based on the regulations in effect during those years. In 2002 the BOF increased the percentage of sockeye salmon harvest considered Chignik-bound from 80% to 90% in the Cape Igvak fishery. The figures reported in this table are the portion of the catches considered Chignik-bound. These figures do not include Chignik test fishery harvests or fish retained for home pack as they are not included in the allocation scheme.

[b] Beginning in 1978 the Cape Igvak Salmon Management Plan allocated up to 15% of the total catch of Chignik-bound sockeye salmon to the Cape Igvak fishery.

[c] Beginning in 1985 the Southeastern District Mainland was allowed an allocation of 6.2% of the total harvest of Chignik-bound sockeye salmon through July 25. Certain areas (which changed frequently) were excluded from the allocation and managed for local (Orzinski Lake) stocks (see regulations from the individual years). After July 25 the entire Southeast District Mainland was managed based on local stock abundance. The allocation level changed to 6.0% beginning in 1988. Beginning in 1992, the allocation of Chignik bound sockeye to the Southeastern District Mainland fishery was increased to 7.0%. Prior to the 1996 season, the BOF decreased the allocation from 7.0% to 6.0%.

[d] Includes a forgone harvest of 278,305 sockeye salmon during a Chignik area strike (June 23 to July 4).

[e] Includes a forgone harvest of 208,921 sockeye salmon during a Chignik area strike (June 2 to June 25).

[f] Includes a forgone harvest of 52,131 sockeye salmon during a Chignik area strike (June 16 to June 29).

[g] Includes a forgone harvest of 389,887 sockeye salmon in Chignik during a Chignik area strike (June 16 to 29), and foregone harvest of 27,896 sockeye salmon in the SEDM during a strike on the South Peninsula (June 14 to July 2).

Table 23.-Chignik Management Area sockeye salmon allocations and actual harvests (including fish retained as home pack but not test fishery harvests), 2002 through 2005.

		Percentage			Number of Sockeye Salmon		
Year	Fleet	Allocation	Actual	Difference	Allocation	Actual	Difference
2002	Cooperative	69.3	69.3	-0.03	721,726	721,428	-298
	Competitive	30.7	30.7	0.03	319,726	320,024	298
	Total	100.0	100.0		1,041,452	1,041,452	
2003	Cooperative	69.3	69.5	0.15	758,637	760,331	1,694
	Competitive	30.7	30.5	-0.15	336,078	334,384	-1,694
	Total	100.0	100.0		1,094,715	1,094,715	
2004	Cooperative	87.0	86.6	-0.37	607,898	605,288	-2,610
	Competitive	13.0	13.4	0.37	90,835	93,445	2,610
	Total	100.0	100.0		698,733	698,733	
2005	Cooperative	68.4	68.4	0.00	783,219	782,206	1,013
	Competitive	31.6	31.6	0.00	361,838	362,851	-1,013
	Total	100.0	100.0		1,145,057	1,145,057	

Table 24.-Chignik sockeye salmon escapement, total catch considered Chignik bound, and total run, 1970 through 2005.

	Early Run			Late Run			Total Run[a,b,c]		
Year	Esc.	Catch	Run	Esc.	Catch	Run	Esc.	Catch	Run
1970	536,257	1,566,065	2,102,322	119,952	262,244	382,196	656,209	1,828,309	2,484,518
1971	671,668	555,832	1,227,500	232,501	709,190	941,691	904,169	1,265,022	2,169,191
1972	326,320	43,220	369,540	231,270	386,615	617,885	557,590	429,835	987,425
1973	533,047	610,488	1,143,535	249,144	355,195	604,339	782,191	965,683	1,747,874
1974	351,701	204,722	556,423	326,245	648,283	974,528	677,946	853,005	1,530,951
1975	308,914	7,873	316,787	268,734	417,560	686,294	577,648	425,433	1,003,081
1976	551,254	599,341	1,150,595	279,509	727,043	1,006,552	830,763	1,326,384	2,157,147
1977	482,247	534,198	1,016,445	251,753	1,602,363	1,854,116	734,000	2,136,561	2,870,561
1978	458,660	940,188	1,398,848	223,887	885,173	1,109,060	682,547	1,825,361	2,507,908
1979	385,694	186,537	572,231	352,122	933,788	1,285,910	737,816	1,120,325	1,858,141
1980	311,332	73,742	385,074	352,729	849,980	1,202,709	664,061	923,722	1,587,783
1981	438,540	800,364	1,238,904	392,909	1,444,030	1,836,939	831,449	2,244,394	3,075,843
1982	616,117	1,324,396	1,940,513	221,601	426,835	648,436	837,718	1,751,231	2,588,949
1983	426,177	1,128,246	1,554,423	409,458	1,241,369	1,650,827	835,635	2,369,615	3,205,250
1984	597,712	2,919,984	3,517,696	267,862	613,299	881,161	865,574	3,533,283	4,398,857
1985	376,576	654,431	1,031,007	369,262	442,119	811,381	745,838	1,096,550	1,842,388
1986	566,088	1,364,295	1,930,383	207,231	587,562	794,793	773,319	1,951,857	2,725,176
1987	589,291	1,947,088	2,536,379	214,452	420,142	634,594	803,743	2,367,230	3,170,973
1988	420,577	271,377	691,954	255,180	554,304	809,484	675,757	825,681	1,501,438
1989	384,004	234,237	618,241	557,171	929,535	1,486,706	941,175	1,163,772	2,104,947
1990	434,543	582,520	1,017,063	335,867	1,735,901	2,071,768	770,410	2,318,421	3,088,831
1991	657,511	1,711,549	2,384,420	382,587	661,025	1,028,252	1,040,098	2,372,574	3,412,672
1992	360,681	744,417	1,105,098	405,922	777,311	1,183,233	766,603	1,521,728	2,288,331
1993	364,261	926,892	1,291,153	333,116	1,199,122	1,532,238	697,377	2,126,014	2,823,391
1994	769,462	1,595,176	2,364,638	197,447	416,377	613,824	966,909	2,011,553	2,978,462
1995	366,163	666,799	1,032,962	373,757	1,315,862	1,689,619	739,920	1,982,661	2,722,581
1996	464,461	1,688,264	2,152,725	284,676	705,657	990,333	749,137	2,393,921	3,143,058
1997	396,667	234,824	631,491	378,951	535,523	914,474	775,618	770,347	1,545,965
1998	410,659	313,158	723,817	290,469	816,987	1,107,456	701,128	1,130,145	1,831,273
1999	457,429	2,022,272	2,479,701	258,537	1,723,915	1,982,452	715,966	3,746,187	4,462,153
2000	536,141	1,574,391	2,110,532	269,084	575,597	844,681	805,225	2,149,988	2,955,213
2001	744,013	563,539	1,307,552	392,905	1,214,403	1,607,308	1,136,918	1,777,942	2,914,860
2002	380,701	684,728	1,065,428	343,616	565,339	908,955	724,317	1,250,067	1,974,383
2003	350,004	640,084	990,088	334,119	652,144	986,263	684,123	1,292,228	1,976,351
2004	363,800	727,975	1,091,775	214,459	192,465	406,924	578,259	920,440	1,498,700
2005	355,091	1,109,881	1,464,972	225,366	487,242	712,608	580,457	1,597,123	2,177,580
Averages									
1985-04	478,720	1,069,918	1,549,369	326,746	842,071	1,168,086	805,466	1,911,989	2,717,455
1995-04	487,570	998,324	1,485,893	312,356	852,180	1,164,537	799,926	1,850,504	2,650,430
2000-04	493,658	1,097,003	1,590,660	319,652	946,280	1,265,932	813,310	2,043,282	2,856,592

[a] Includes Cape Igvak and SEDM harvests considered Chignik-bound as defined in regulation. However, portions of the harvests from Cape Igvak and SEDM from 1970 to 1979 were not considered Chignik-bound by regulation, but were included in this table for comparison purposes.

[b] Does not include subsistence-caught fish.

[c] Includes catches from the Chignik Lagoon test fishery and fish retained for home pack.

Table 25.-Chignik sockeye salmon forecasts and actual runs, by run and year, 1993 through 2005.

	Early Run (millions)			Late Run (millions)			Total Run (millions)		
Year	Forecast	Actual	% Error	Forecast	Actual	% Error	Forecast	Actual	% Error
1993	1.60	1.29	19	0.95	1.53	-61	2.55	2.82	-11
1994	1.80	2.36	-31	1.30	0.61	53	3.10	2.98	4
1995	1.90	1.03	46	0.90	1.69	-88	2.80	2.72	3
1996	1.40	2.15	-54	1.60	0.99	38	3.00	3.14	-5
1997	1.00	0.63	37	1.60	0.91	43	2.60	1.55	41
1998	0.90	0.72	20	1.10	1.11	-1	2.00	1.83	8
1999	1.05	2.48	-136	1.29	1.98	-54	2.34	4.46	-91
2000	3.90	2.11	46	1.09	0.84	23	4.99	2.96	41
2001	1.00	1.31	-31	0.91	1.61	-77	1.91	2.91	-53
2002	1.03	1.07	-4	1.09	0.91	17	2.12	1.98	7
2003	1.64	0.99	40	1.19	0.99	17	2.83	1.98	30
2004	1.26	1.09	13	1.08	0.41	62	2.34	1.50	36
2005	1.84	1.46	21	0.55	0.71	-29	2.39	2.18	9
Averages									
1995 to 2004	1.51	1.36	-2	1.19	1.14	-2	2.69	2.50	2
2000 to 2004	1.77	1.31	13	1.07	0.95	8	2.84	2.27	12

Table 26.-Chignik Management Area coho salmon harvest, by year, 1970 through 2005.

	Testfish		Commercial Catch		Home Pack		Total	
Year	Number	Pounds	Number	Pounds	Number	Pounds[a]	Number	Pounds
1970	ND	ND	15,348	103,879	ND	ND	15,348	103,879
1971	ND	ND	14,557	96,832	ND	ND	14,557	96,832
1972	ND	ND	19,615	138,345	ND	ND	19,615	138,345
1973	ND	ND	22,322	172,190	ND	ND	22,322	172,190
1974	ND	ND	12,245	97,037	ND	ND	12,245	97,037
1975	ND	ND	53,283	467,912	ND	ND	53,283	467,912
1976	ND	ND	35,167	294,954	ND	ND	35,167	294,954
1977	ND	ND	17,430	156,418	ND	ND	17,430	156,418
1978	ND	ND	20,212	158,270	ND	ND	20,212	158,270
1979	ND	ND	99,129	725,035	ND	ND	99,129	725,035
1980	ND	ND	119,573	771,392	ND	ND	119,573	771,392
1981	ND	ND	78,805	602,603	ND	ND	78,805	602,603
1982	ND	ND	300,273	2,373,268	ND	ND	300,273	2,373,268
1983	ND	ND	61,927	488,203	ND	ND	61,927	488,203
1984	ND	ND	110,128	949,965	ND	ND	110,128	949,965
1985	0	0	191,162	1,709,637	ND	ND	191,162	1,709,637
1986	ND	ND	116,633	867,195	ND	ND	116,633	867,195
1987	0	0	150,414	1,189,803	ND	ND	150,414	1,189,803
1988	0	0	370,420	2,889,427	ND	ND	370,420	2,889,427
1989	0	0	68,233	559,140	ND	ND	68,233	559,140
1990	0	0	130,131	933,745	ND	ND	130,131	933,745
1991	42	253	165,583	1,182,704	ND	ND	165,625	1,182,957
1992	1	8	310,942	2,362,683	ND	ND	310,943	2,362,691
1993	356	2,024	229,103	1,459,220	ND	ND	229,459	1,461,244
1994	103	506	237,101	1,996,320	ND	ND	237,204	1,996,826
1995	0	0	280,605	2,062,086	913	6,709	281,518	2,068,795
1996	0	0	193,226	1,485,947	20	154	193,246	1,486,101
1997	0	0	90,908	756,509	0	0	90,908	756,509
1998	0	0	129,512	1,045,823	27	218	129,539	1,046,041
1999	0	0	89,410	617,320	200	1,381	89,610	618,701
2000	0	0	123,222	943,536	0	0	123,222	943,536
2001	0	0	131,441	1,012,153	7	54	131,448	1,012,207
2002	0	0	49,208	360,781	164	1,202	49,372	361,983
2003	44	287	103,778	857,097	74	611	103,896	857,995
2004	0	0	37	283	0	0	37	283
2005	0	0	6,951	46,970	5	30	6,956	47,000
Averages								
1985-04	29	162	158,053	1,214,570	141	1,033	158,151	1,215,241
1995-04	4	29	119,135	914,154	141	1,033	119,280	915,215
2000-04	9	57	81,537	634,770	49	373	81,595	635,201

[a] Weights of home pack fish are not reported on fish tickets; therefore, the weights were calculated from the average weight of the commercial harvest for that year.

Table 27.-Chignik Management Area coho salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2005.

	District					
Year	Chignik Bay	Central	Eastern	Western	Perryville	Total
1970	4,578	62	399	9,745	564	15,348
1971	10,928	62	301	2,297	969	14,557
1972	17,692	2	160	1,579	182	19,615
1973	22,304	6	12	0	0	22,322
1974	11,056	414	0	775	0	12,245
1975	52,407	260	0	0	616	53,283
1976	34,426	173	109	32	427	35,167
1977	16,810	189	7	378	46	17,430
1978	14,467	24	21	3,848	1,852	20,212
1979	52,966	3,556	3,869	31,300	7,438	99,129
1980	49,784	7,167	13,872	34,631	14,119	119,573
1981	35,578	8,693	6,222	22,047	6,265	78,805
1982	132,262	6,564	31,476	122,707	7,264	300,273
1983	29,519	330	441	27,173	4,464	61,927
1984	72,722	1,705	403	33,263	2,035	110,128
1985	156,553	7,111	3,203	23,357	938	191,162
1986	60,197	3,027	1,033	33,726	18,650	116,633
1987	77,333	3,806	7	58,688	10,580	150,414
1988	94,292	21,628	6,167	207,086	41,247	370,420
1989	68,231	2	0	0	0	68,233
1990	61,260	27,659	32	23,422	17,758	130,131
1991	56,574	9,294	1,187	57,373	41,197	165,625
1992	80,946	19,612	4,260	140,560	65,565	310,943
1993	48,808	36,421	4,240	84,056	55,934	229,459
1994	70,541	19,794	176	110,476	36,217	237,204
1995	54,646	46,975	458	88,116	91,323	281,518
1996	45,361	35,440	33	91,587	20,825	193,246
1997	32,847	45,878	1,801	9,139	1,243	90,908
1998	23,070	32,743	1,227	55,359	17,140	129,539
1999	23,144	24,308	3,095	36,405	2,658	89,610
2000	11,620	37,943	2,555	69,599	1,505	123,222
2001	10,007	31,062	2,303	86,580	1,496	131,448
2002	8,461	4,442	0	36,283	186	49,372
2003	37,800	7,632	0	55,225	3,239	103,896
2004	37	0	0	0	0	37
2005	510	730	12	5,045	659	6,956
Averages						
1985-04	51,086	20,739	1,589	63,352	21,385	158,151
1995-04	24,699	26,642	1,147	52,829	13,962	119,280
2000-04	13,585	16,216	972	49,537	1,285	81,595

Table 28.-Chignik Management Area coho salmon harvest (including home pack and the department's test fishery catches), by district and day, 2005.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
6/3	Closed	Closed	Closed	Closed	Closed	0
6/4	Closed	Closed	Closed	Closed	Closed	0
6/5	0	0	0	Closed	Closed	0
6/6	0	0	0	Closed	Closed	0
6/7	0	0	0	Closed	Closed	0
6/8	0	0	0	Closed	Closed	0
6/9	0	0	0	Closed	Closed	0
6/10	0	0	0	Closed	Closed	0
6/11	0	0	0	Closed	Closed	0
6/12	0	0	0	Closed	Closed	0
6/13	0	0	0	Closed	Closed	0
6/14	0	0	0	Closed	Closed	0
6/15	0	0	0	Closed	Closed	0
6/16	0	0	0	Closed	Closed	0
6/17	0	0	0	Closed	Closed	0
6/18	0	0	0	Closed	Closed	0
6/19	0	0	0	Closed	Closed	0
6/20	0	0	0	Closed	Closed	0
6/21	0	0	0	Closed	Closed	0
6/22	0	0	0	Closed	Closed	0
6/23	0	0	0	Closed	Closed	0
6/24	0	0	0	Closed	Closed	0
6/25	0	0	0	Closed	Closed	0
6/26	Closed	Closed	Closed	Closed	Closed	0
6/27	Closed	Closed	Closed	Closed	Closed	0
6/28	0	0	0	Closed	Closed	0
6/29	0	0	0	Closed	Closed	0
6/30	0	0	0	Closed	Closed	0
7/1	3	0	0	Closed	Closed	3
7/2	1	0	0	Closed	Closed	1
7/3	1	0	0	Closed	Closed	1
7/4	2	6	0	Closed	Closed	8
7/5	1	202	Closed	Closed	Closed	203
7/6	227	0	Closed	2,462	659	3,348
7/7	0	0	Closed	959	0	959
7/8	4	0	Closed	1,624	0	1,628
7/9	0	0	Closed	Closed	Closed	0
7/10	0	0	Closed	Closed	Closed	0
7/11	0	0	Closed	Closed	Closed	0
7/12	0	0	Closed	Closed	Closed	0
7/13	0	0	Closed	Closed	Closed	0
7/14	2	0	Closed	Closed	Closed	2
7/15	0	188	Closed	0	0	188
7/16	0	136	Closed	0	0	136
7/17	0	0	Closed	0	0	0
7/18	0	0	Closed	Closed	Closed	0

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Table 28.-Page 2 of 2.

Date	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
7/19	0	0	Closed	Closed	Closed	0
7/20	0	0	Closed	Closed	Closed	0
7/21	15	0	Closed	Closed	Closed	15
7/22	6	0	Closed	Closed	Closed	6
7/23	0	0	Closed	Closed	Closed	0
7/24	0	0	0	Closed	Closed	0
7/25	2	156	Closed	Closed	Closed	158
7/26	0	0	Closed	Closed	Closed	0
7/27	8	0	Closed	Closed	Closed	8
7/28	5	0	Closed	Closed	Closed	5
7/29	0	0	0	Closed	Closed	0
7/30	37	0	0	Closed	Closed	37
7/31	94	0	0	Closed	Closed	94
8/1	11	0	0	Closed	Closed	11
8/2	91	42	Closed	Closed	Closed	133
8/3	Closed	Closed	Closed	Closed	Closed	0
8/4	0	0	Closed	Closed	Closed	0
8/5	0	0	Closed	Closed	Closed	0
8/6	0	0	Closed	Closed	Closed	0
8/7	Closed	Closed	Closed	Closed	Closed	0
8/8	Closed	Closed	Closed	Closed	Closed	0
8/9	Closed	Closed	Closed	Closed	Closed	0
8/10	Closed	Closed	Closed	Closed	Closed	0
8/11	Closed	Closed	Closed	Closed	Closed	0
8/12	Closed	Closed	Closed	Closed	Closed	0
8/13	Closed	Closed	Closed	Closed	Closed	0
8/14	Closed	Closed	Closed	Closed	Closed	0
8/15	Closed	Closed	12	Closed	Closed	12
8/16	Closed	Closed	Closed	Closed	Closed	0
8/17	Closed	Closed	Closed	Closed	Closed	0
8/18	Closed	Closed	Closed	Closed	Closed	0
8/19	Closed	Closed	Closed	Closed	Closed	0
8/20	Closed	Closed	Closed	Closed	Closed	0
Total	510	730	12	5,045	659	6,956

Table 29.-Chignik Management Area pink salmon harvest, by year, 1970 through 2005.

	Testfish		Commercial Catch		Home Pack		Total	
Year	Number	Pounds	Number	Pounds	Number	Pounds[a]	Number	Pounds
1970	ND	ND	1,157,172	4,104,927	ND	ND	1,157,172	4,104,927
1971	ND	ND	612,290	2,291,832	ND	ND	612,290	2,291,832
1972	ND	ND	72,161	278,778	ND	ND	72,161	278,778
1973	ND	ND	25,444	104,457	ND	ND	25,444	104,457
1974	ND	ND	69,515	290,712	ND	ND	69,515	290,712
1975	ND	ND	66,165	260,631	ND	ND	66,165	260,631
1976	ND	ND	395,287	1,749,923	ND	ND	395,287	1,749,923
1977	ND	ND	604,806	2,435,862	ND	ND	604,806	2,435,862
1978	ND	ND	985,114	3,454,877	ND	ND	985,114	3,454,877
1979	ND	ND	1,905,198	7,154,954	ND	ND	1,905,198	7,154,954
1980	ND	ND	1,093,184	3,635,145	ND	ND	1,093,184	3,635,145
1981	ND	ND	1,162,613	4,479,368	ND	ND	1,162,613	4,479,368
1982	ND	ND	873,384	2,916,671	ND	ND	873,384	2,916,671
1983	ND	ND	321,178	1,200,888	ND	ND	321,178	1,200,888
1984	ND	ND	444,804	1,651,249	ND	ND	444,804	1,651,249
1985	0	0	160,128	643,731	ND	ND	160,128	643,731
1986	ND	ND	647,125	2,374,311	ND	ND	647,125	2,374,311
1987	0	0	246,775	899,560	ND	ND	246,775	899,560
1988	0	0	2,997,159	10,723,505	ND	ND	2,997,159	10,723,505
1989	0	0	27,712	94,269	ND	ND	27,712	94,269
1990	0	0	550,008	1,675,644	ND	ND	550,008	1,675,644
1991	2,660	9,237	1,166,588	3,348,394	ND	ND	1,169,248	3,357,631
1992	114	536	1,553,959	5,798,623	ND	ND	1,554,073	5,799,159
1993	1,826	5,539	1,646,551	5,308,258	ND	ND	1,648,377	5,313,797
1994	14	55	431,049	1,494,604	ND	ND	431,063	1,494,659
1995	0	0	2,057,998	7,350,386	0	0	2,057,998	7,350,386
1996	0	0	183,806	536,218	5,262	15,351	189,068	551,569
1997	0	0	844,431	2,784,333	0	0	844,431	2,784,333
1998	0	0	776,988	2,586,026	0	0	776,988	2,586,026
1999	0	0	1,698,651	4,845,435	0	0	1,698,651	4,845,435
2000	0	0	428,064	1,183,004	0	0	428,064	1,183,004
2001	0	0	1,281,760	4,077,814	7	22	1,281,767	4,077,836
2002	66	276	65,984	206,385	0	0	66,050	206,661
2003	570	2,167	501,661	1,951,928	407	1,584	502,638	1,955,679
2004	0	0	2,380	7,589	0	0	2,380	7,589
2005	8	48	193,803	611,023	234	813	194,045	611,884
Averages								
1985-04	276	937	863,439	2,894,501	568	1,696	863,985	2,896,239
1995-04	64	244	784,172	2,552,912	568	1,696	784,804	2,554,852
2000-04	127	489	455,970	1,485,344	83	321	456,180	1,486,154

[a] Weights of home pack fish are not reported on fish tickets; therefore, they were calculated from the average weight of the commercial harvest.

Table 30.-Chignik Management Area pink salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2005.

	District					
Year	Chignik Bay	Central	Eastern	Western	Perryville	Total
1970	46,297	27,919	268,857	442,684	371,415	1,157,172
1971	65,281	20,518	28,959	285,447	212,085	612,290
1972	31,606	766	12,928	14,880	11,981	72,161
1973	22,674	293	2,477	28	0	25,472
1974	33,484	22,084	568	13,379	0	69,515
1975	27,377	31,342	0	7,446	0	66,165
1976	108,827	16,583	28,828	135,803	105,246	395,287
1977	60,932	120,018	239	379,038	44,579	604,806
1978	137,074	61,224	86,778	419,280	280,758	985,114
1979	312,406	284,414	292,364	744,613	271,401	1,905,198
1980	180,912	108,682	472,510	216,460	114,620	1,093,184
1981	121,380	210,023	173,293	433,605	224,312	1,162,613
1982	82,973	80,606	89,074	602,408	18,323	873,384
1983	27,284	7,861	7,817	164,338	113,878	321,178
1984	165,178	47,250	57,715	173,820	841	444,804
1985	14,429	16,087	6,570	80,577	42,465	160,128
1986	191,264	44,127	49,635	200,793	161,306	647,125
1987	13,887	7,769	2,079	187,701	35,339	246,775
1988	119,794	318,370	1,006,366	1,141,382	411,247	2,997,159
1989	27,691	21	0	0	0	27,712
1990	94,528	233,677	40,574	135,810	45,419	550,008
1991	76,163	173,967	27,979	419,264	471,875	1,169,248
1992	178,105	205,750	183,119	628,900	358,199	1,554,073
1993	55,909	205,037	52,755	685,605	649,071	1,648,377
1994	59,425	99,149	12,952	174,641	84,896	431,063
1995	106,939	469,745	8,572	791,718	681,024	2,057,998
1996	1,804	20,717	7,201	100,871	58,475	189,068
1997	39,461	603,575	72,347	118,003	11,045	844,431
1998	26,054	233,732	66,725	343,187	107,290	776,988
1999	59,001	664,208	40,571	771,411	163,460	1,698,651
2000	28,067	271,417	10,500	106,147	11,933	428,064
2001	75,142	641,438	97,438	424,537	43,212	1,281,767
2002	10,253	17,580	0	36,918	1,299	66,050
2003	56,042	88,736	267	326,239	31,354	502,638
2004	2,378	2	0	0	0	2,380
2005	71,438	99,491	21	20,952	2,143	194,045
Averages						
1985-04	61,817	215,755	84,283	333,685	168,445	863,985
1995-04	40,514	301,115	30,362	301,903	110,909	784,804
2000-04	34,376	203,835	21,641	178,768	17,560	456,180

Table 31.-Chignik Management Area pink salmon harvest (including home pack and the department's test fishery catches), by district and day, 2005.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
6/3	Closed	Closed	Closed	Closed	Closed	0
6/4	Closed	Closed	Closed	Closed	Closed	0
6/5	0	0	0	Closed	Closed	0
6/6	0	0	0	Closed	Closed	0
6/7	0	0	0	Closed	Closed	0
6/8	0	0	0	Closed	Closed	0
6/9	0	0	0	Closed	Closed	0
6/10	0	640	0	Closed	Closed	640
6/11	0	0	0	Closed	Closed	0
6/12	0	0	0	Closed	Closed	0
6/13	0	0	0	Closed	Closed	0
6/14	0	0	0	Closed	Closed	0
6/15	5	2,172	0	Closed	Closed	2,177
6/16	2	1,576	0	Closed	Closed	1,578
6/17	35	0	0	Closed	Closed	35
6/18	0	0	0	Closed	Closed	0
6/19	13	0	0	Closed	Closed	13
6/20	84	0	0	Closed	Closed	84
6/21	42	0	0	Closed	Closed	42
6/22	5	0	0	Closed	Closed	5
6/23	15	0	0	Closed	Closed	15
6/24	68	1,751	0	Closed	Closed	1,819
6/25	3	1,004	0	Closed	Closed	1,007
6/26	Closed	Closed	Closed	Closed	Closed	0
6/27	Closed	Closed	Closed	Closed	Closed	0
6/28	30	0	0	Closed	Closed	30
6/29	92	0	0	Closed	Closed	92
6/30	485	0	0	Closed	Closed	485
7/1	688	0	0	Closed	Closed	688
7/2	313	0	0	Closed	Closed	313
7/3	122	0	0	Closed	Closed	122
7/4	834	528	0	Closed	Closed	1,362
7/5	174	12,023	Closed	Closed	Closed	12,197
7/6	534	0	Closed	8,564	2,143	11,241
7/7	127	0	Closed	5,015	0	5,142
7/8	414	0	Closed	7,373	0	7,787
7/9	286	0	Closed	Closed	Closed	286
7/10	1,110	0	Closed	Closed	Closed	1,110
7/11	550	0	Closed	Closed	Closed	550
7/12	377	0	Closed	Closed	Closed	377
7/13	478	0	Closed	Closed	Closed	478
7/14	1,487	0	Closed	Closed	Closed	1,487
7/15	3,461	27,393	Closed	0	0	30,854
7/16	4,605	15,681	Closed	0	0	20,286
7/17	48	0	Closed	0	0	48
7/18	2,148	0	Closed	Closed	Closed	2,148

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Table 31.-Page 2 of 2.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
7/19	1,455	0	Closed	Closed	Closed	1,455
7/20	1,036	0	Closed	Closed	Closed	1,036
7/21	2,336	0	Closed	Closed	Closed	2,336
7/22	3,233	0	Closed	Closed	Closed	3,233
7/23	2,161	0	Closed	Closed	Closed	2,161
7/24	1,446	0	0	Closed	Closed	1,446
7/25	3,668	25,805	Closed	Closed	Closed	29,473
7/26	2,928	0	Closed	Closed	Closed	2,928
7/27	3,788	0	Closed	Closed	Closed	3,788
7/28	2,843	0	Closed	Closed	Closed	2,843
7/29	4,755	0	0	Closed	Closed	4,755
7/30	4,563	0	0	Closed	Closed	4,563
7/31	5,497	0	0	Closed	Closed	5,497
8/1	5,657	0	0	Closed	Closed	5,657
8/2	6,645	10,918	Closed	Closed	Closed	17,563
8/3	Closed	Closed	Closed	Closed	Closed	0
8/4	0	0	Closed	Closed	Closed	0
8/5	0	0	Closed	Closed	Closed	0
8/6	792	0	Closed	Closed	Closed	792
8/7	Closed	Closed	Closed	Closed	Closed	0
8/8	Closed	Closed	Closed	Closed	Closed	0
8/9	Closed	Closed	Closed	Closed	Closed	0
8/10	Closed	Closed	Closed	Closed	Closed	0
8/11	Closed	Closed	Closed	Closed	Closed	0
8/12	Closed	Closed	Closed	Closed	Closed	0
8/13	Closed	Closed	Closed	Closed	Closed	0
8/14	Closed	Closed	Closed	Closed	Closed	0
8/15	Closed	Closed	21	Closed	Closed	21
8/16	Closed	Closed	Closed	Closed	Closed	0
8/17	Closed	Closed	Closed	Closed	Closed	0
8/18	Closed	Closed	Closed	Closed	Closed	0
8/19	Closed	Closed	Closed	Closed	Closed	0
8/20	Closed	Closed	Closed	Closed	Closed	0
Total	71,438	99,491	21	20,952	2,143	194,045

Table 32.-Annual Chignik Management Area chum salmon harvest, 1970 through 2005.

	Testfish		Commercial Catch		Home Pack		Total	
Year	Number	Pounds	Number	Pounds	Number	Pounds[a]	Number	Pounds
1970	ND	ND	437,252	3,004,113	ND	ND	437,252	3,004,113
1971	ND	ND	353,952	2,420,446	ND	ND	353,952	2,420,446
1972	ND	ND	78,298	603,726	ND	ND	78,298	603,726
1973	ND	ND	8,701	67,812	ND	ND	8,701	67,812
1974	ND	ND	34,312	246,288	ND	ND	34,312	246,288
1975	ND	ND	25,161	176,046	ND	ND	25,161	176,046
1976	ND	ND	81,403	678,545	ND	ND	81,403	678,545
1977	ND	ND	110,452	937,365	ND	ND	110,452	937,365
1978	ND	ND	120,889	984,141	ND	ND	120,889	984,141
1979	ND	ND	188,907	1,378,938	ND	ND	188,907	1,378,938
1980	ND	ND	252,521	1,765,287	ND	ND	252,521	1,765,287
1981	ND	ND	580,332	4,502,632	ND	ND	580,332	4,502,632
1982	ND	ND	390,096	3,231,403	ND	ND	390,096	3,231,403
1983	ND	ND	159,412	1,205,266	ND	ND	159,412	1,205,266
1984	ND	ND	63,303	485,967	ND	ND	63,303	485,967
1985	0	0	22,805	145,276	ND	ND	22,805	145,276
1986	ND	ND	176,640	1,304,418	ND	ND	176,640	1,304,418
1987	0	0	127,261	943,941	ND	ND	127,261	943,941
1988	0	0	267,775	2,196,377	ND	ND	267,775	2,196,377
1989	0	0	1,624	11,888	ND	ND	1,624	11,888
1990	0	0	270,004	1,757,019	ND	ND	270,004	1,757,019
1991	607	4,260	260,489	1,671,939	ND	ND	261,096	1,676,199
1992	16	140	222,118	1,592,186	ND	ND	222,134	1,592,326
1993	57	300	122,303	735,747	ND	ND	122,360	736,047
1994	521	3,437	226,755	1,627,574	ND	ND	227,276	1,631,011
1995	0	0	380,949	2,814,987	5	37	380,949	2,815,024
1996	0	0	99,791	779,840	21,100	164,891	120,891	944,731
1997	0	0	155,905	1,196,999	0	0	155,905	1,196,999
1998	0	0	128,841	917,648	155	1,104	128,996	918,752
1999	0	0	140,594	1,064,433	3	0	140,597	1,064,433
2000	0	0	120,957	1,033,665	0	0	120,957	1,033,665
2001	0	0	198,874	1,609,533	129	1,044	199,003	1,610,577
2002	46	334	54,513	406,382	0	0	54,559	406,716
2003	137	1,394	63,907	447,921	0	0	64,044	449,315
2004	0	0	2,380	7,589	0	0	2,380	7,589
2005	2	15	8,704	63,379	115	825	8,821	64,219
Averages								
1985-04	73	519	152,224	1,113,268	-	-	153,363	1,122,115
1995-04	18	173	134,671	1,027,900	2,139	16,708	136,641	1,044,780
2000-04	37	346	88,126	701,018	26	209	88,189	701,572

[a] Weights of home pack fish are not reported on fish tickets; therefore, they were calculated from the average weight of the commercial harvest.

Table 33.-Chignik Management Area chum salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2005.

	District					
Year	Chignik Bay	Central	Eastern	Western	Perryville	Total
1970	1,660	28,628	241,108	139,551	26,305	437,252
1971	19,449	13,723	102,344	177,534	40,902	353,952
1972	18,178	1,566	27,723	18,535	12,296	78,298
1973	7,254	229	1,218	16	0	8,717
1974	17,317	13,516	255	3,224	0	34,312
1975	21,137	3,225	0	799	0	25,161
1976	19,237	3,358	10,020	33,051	15,737	81,403
1977	8,621	8,888	1,507	88,027	3,409	110,452
1978	15,020	10,317	17,451	45,991	32,110	120,889
1979	32,176	11,427	36,090	82,326	26,888	188,907
1980	19,944	38,902	56,805	91,868	45,002	252,521
1981	38,061	160,730	108,668	221,579	51,294	580,332
1982	16,034	33,669	64,513	253,299	22,581	390,096
1983	16,747	9,815	8,250	101,959	22,641	159,412
1984	8,173	8,150	21,134	25,364	482	63,303
1985	4,905	5,242	864	10,704	1,090	22,805
1986	18,167	29,502	17,880	74,070	37,021	176,640
1987	5,163	9,437	8,890	86,898	16,873	127,261
1988	7,013	39,316	77,511	102,730	41,205	267,775
1989	1,587	34	3	0	0	1,624
1990	11,460	113,741	27,463	91,603	25,737	270,004
1991	17,545	51,429	4,925	98,603	88,594	261,096
1992	12,711	45,569	61,209	65,466	37,179	222,134
1993	8,116	43,306	21,157	25,045	24,736	122,360
1994	25,250	69,552	4,333	94,116	34,025	227,276
1995	14,588	107,066	8,074	158,273	92,953	380,954
1996	782	46,993	19,837	36,303	16,976	120,891
1997	20,978	104,259	11,397	16,280	2,991	155,905
1998	7,352	43,191	5,180	41,425	31,848	128,996
1999	12,150	75,495	11,332	37,089	4,531	140,597
2000	8,389	66,904	8,045	34,823	2,796	120,957
2001	11,534	84,132	50,911	37,466	14,960	199,003
2002	3,949	9,643	513	40,337	117	54,559
2003	10,891	11,304	50	39,883	1,916	64,044
2004	499	6	0	0	0	505
2005	2,370	5,329	2	1,054	66	8,821
Averages						
1985-04	10,151	47,806	16,979	54,556	23,777	153,269
1995-04	9,111	54,899	11,534	44,188	16,909	136,641
2000-04	7,052	34,398	11,904	30,502	3,958	87,814

Table 34.-Chignik Management Area chum salmon harvest (including home pack and the department's test fishery catches), by district and day, 2005.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
6/3	Closed	Closed	Closed	Closed	Closed	0
6/4	Closed	Closed	Closed	Closed	Closed	0
6/5	0	0	0	Closed	Closed	0
6/6	0	0	0	Closed	Closed	0
6/7	0	0	0	Closed	Closed	0
6/8	0	0	0	Closed	Closed	0
6/9	0	0	0	Closed	Closed	0
6/10	0	69	0	Closed	Closed	69
6/11	0	0	0	Closed	Closed	0
6/12	0	0	0	Closed	Closed	0
6/13	0	0	0	Closed	Closed	0
6/14	0	0	0	Closed	Closed	0
6/15	0	69	0	Closed	Closed	69
6/16	0	92	0	Closed	Closed	92
6/17	14	0	0	Closed	Closed	14
6/18	0	0	0	Closed	Closed	0
6/19	4	0	0	Closed	Closed	4
6/20	31	0	0	Closed	Closed	31
6/21	5	0	0	Closed	Closed	5
6/22	3	0	0	Closed	Closed	3
6/23	0	0	0	Closed	Closed	0
6/24	3	764	0	Closed	Closed	767
6/25	0	195	0	Closed	Closed	195
6/26	Closed	Closed	Closed	Closed	Closed	0
6/27	Closed	Closed	Closed	Closed	Closed	0
6/28	3	0	0	Closed	Closed	3
6/29	4	0	0	Closed	Closed	4
6/30	16	0	0	Closed	Closed	16
7/1	31	0	0	Closed	Closed	31
7/2	385	0	0	Closed	Closed	385
7/3	12	0	0	Closed	Closed	12
7/4	12	121	0	Closed	Closed	133
7/5	5	1,725	Closed	Closed	Closed	1,730
7/6	87	0	Closed	394	66	547
7/7	10	0	Closed	151	0	161
7/8	29	0	Closed	509	0	538
7/9	8	0	Closed	Closed	Closed	8
7/10	55	0	Closed	Closed	Closed	55
7/11	9	0	Closed	Closed	Closed	9
7/12	9	0	Closed	Closed	Closed	9
7/13	62	0	Closed	Closed	Closed	62
7/14	32	0	Closed	Closed	Closed	32
7/15	74	901	Closed	0	0	975
7/16	47	501	Closed	0	0	548
7/17	0	0	Closed	0	0	0
7/18	67	0	Closed	Closed	Closed	67

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Table 34.-Page 2 of 2.

	District					
Date	Chignik Bay	Central	Eastern	Western	Perryville	Total
7/19	19	0	Closed	Closed	Closed	19
7/20	26	0	Closed	Closed	Closed	26
7/21	24	0	Closed	Closed	Closed	24
7/22	87	0	Closed	Closed	Closed	87
7/23	120	0	Closed	Closed	Closed	120
7/24	87	0	0	Closed	Closed	87
7/25	147	597	Closed	Closed	Closed	744
7/26	89	0	Closed	Closed	Closed	89
7/27	67	0	Closed	Closed	Closed	67
7/28	67	0	Closed	Closed	Closed	67
7/29	101	0	0	Closed	Closed	101
7/30	73	0	0	Closed	Closed	73
7/31	97	0	0	Closed	Closed	97
8/1	52	0	0	Closed	Closed	52
8/2	264	295	Closed	Closed	Closed	559
8/3	Closed	Closed	Closed	Closed	Closed	0
8/4	0	0	Closed	Closed	Closed	0
8/5	0	0	Closed	Closed	Closed	0
8/6	33	0	Closed	Closed	Closed	33
8/7	Closed	Closed	Closed	Closed	Closed	0
8/8	Closed	Closed	Closed	Closed	Closed	0
8/9	Closed	Closed	Closed	Closed	Closed	0
8/10	Closed	Closed	Closed	Closed	Closed	0
8/11	Closed	Closed	Closed	Closed	Closed	0
8/12	Closed	Closed	Closed	Closed	Closed	0
8/13	Closed	Closed	Closed	Closed	Closed	0
8/14	Closed	Closed	Closed	Closed	Closed	0
8/15	Closed	Closed	2	Closed	Closed	2
8/16	Closed	Closed	Closed	Closed	Closed	0
8/17	Closed	Closed	Closed	Closed	Closed	0
8/18	Closed	Closed	Closed	Closed	Closed	0
8/19	Closed	Closed	Closed	Closed	Closed	0
8/20	Closed	Closed	Closed	Closed	Closed	0
Total	2,370	5,329	2	1,054	66	8,821

Table 35.-Value of the commercial salmon harvest, by species, and average value per active permit, in dollars, in the Chignik Management Area, 1970 through 2005.

	Chinook		Sockeye		Coho		Pink		Chum		Total	Number of	Value Per
Year	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Value ($)	Permits	Permit ($)
1970	6,129	77	2,190,272	27,378	18,397	230	635,673	7,946	376,025	4,700	3,226,496	80	40,331
1971	6,472	84	2,034,279	26,419	23,240	302	366,693	4,762	326,760	4,244	2,757,444	77	35,811
1972	2,028	25	825,498	10,319	35,699	446	48,401	605	87,759	1,097	999,385	80	12,492
1973	5,255	67	3,030,057	38,355	73,663	932	20,610	261	10,180	129	3,139,765	79	39,744
1974	2,941	31	3,618,781	38,498	31,933	340	64,069	682	51,125	544	3,768,849	94	40,094
1975	6,561	76	1,384,271	16,096	213,539	2,483	104,115	1,211	61,704	717	1,770,190	86	20,584
1976	13,800	179	4,751,000	61,701	138,000	1,792	568,300	7,381	183,600	2,384	5,654,700	77	73,438
1977	18,828	214	14,553,720	165,383	104,819	1,191	920,881	10,465	368,066	4,183	15,966,314	88	181,435
1978	56,700	597	15,653,500	164,774	116,400	1,225	1,131,500	11,911	404,500	4,258	17,362,600	95	182,764
1979	32,050	311	11,345,503	110,151	710,192	6,895	2,622,269	25,459	126,866	1,232	14,836,880	103	144,047
1980	67,657	651	5,532,290	53,195	520,655	5,006	1,477,060	14,203	1,061,963	10,211	8,659,625	104	83,266
1981	75,231	716	17,262,119	164,401	439,900	4,190	1,881,334	17,917	2,431,421	23,156	22,090,005	105	210,381
1982	75,276	731	13,038,510	126,587	1,782,027	17,301	578,184	5,613	1,356,597	13,171	16,830,594	103	163,404
1983	96,159	943	10,728,088	105,177	219,650	2,153	240,171	2,355	421,713	4,134	11,705,781	102	114,763
1984	114,502	1,145	20,402,076	204,021	759,972	7,600	330,916	3,309	146,024	1,460	21,753,490	100	217,535
1985	67,088	633	7,997,834	75,451	1,471,418	13,881	140,076	1,321	59,475	561	8,735,891	106	82,414
1986	84,800	831	16,882,290	165,513	667,740	6,546	356,147	3,492	456,546	4,476	18,447,523	102	180,858
1987	72,739	706	24,783,033	240,612	1,035,129	10,050	269,868	2,620	339,819	3,299	26,500,588	103	257,287
1988	286,740	2,839	14,350,354	142,083	4,153,424	41,123	6,771,266	67,042	2,189,293	21,676	27,751,077	101	274,763
1989	78,999	790	13,047,378	130,474	436,892	4,369	32,994	330	4,745	47	13,601,008	100	136,010
1990	185,256	1,834	22,509,923	222,871	700,309	6,934	502,693	4,977	878,510	8,698	24,776,691	101	245,314
1991	50,027	490	11,002,784	107,870	650,626	6,379	402,916	3,950	502,860	4,930	12,609,213	102	123,620
1992	193,326	1,914	12,552,025	124,277	1,323,107	13,100	811,882	8,038	414,005	4,099	15,294,345	101	151,429
1993	175,690	1,722	8,210,106	80,491	730,622	7,163	637,666	6,252	184,012	1,804	9,938,096	102	97,432
1994	38,096	385	10,046,245	101,477	1,094,415	11,055	226,504	2,288	430,888	4,352	11,836,148	99	119,557
1995	60,174	602	11,969,210	119,692	834,337	8,343	977,811	9,778	634,780	6,348	14,476,312	100	144,763
1996	25,041	250	12,640,560	126,406	447,228	4,472	24,827	248	32,279	323	13,169,935	100	131,699
1997	20,642	211	4,860,589	49,598	453,905	4,632	348,042	3,551	239,400	2,443	5,922,577	98	60,434
1998	31,934	376	6,631,192	78,014	397,413	4,675	310,323	3,651	137,647	1,619	7,508,509	85	88,335
1999	27,212	302	21,132,550	234,806	170,931	1,899	578,861	6,432	118,547	1,317	22,028,101	90	244,757

-continued-

Table 35.-Page 2 of 2.

	Chinook		Sockeye		Coho		Pink		Chum		Total	Number of	Value Per
Year	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Value ($)	Permits	Permit ($)
2000	16,336	165	11,812,368	119,317	283,061	2,859	106,470	1,075	93,030	940	12,311,264	99	124,356
2001	12,205	133	7,419,339	80,645	263,160	2,860	366,714	3,986	209,239	2,274	8,270,657	92	89,898
2002	3,516	36	4,564,214	46,103	36,078	364	10,333	104	40,671	411	4,654,812	99	47,018
2003	20,212	202	5,283,962	52,840	173,625	1,736	182,100	1,821	71,140	711	5,731,039	100	57,310
2004[a]	26,191	262	3,568,350	35,684	59	1	835	8	647	6	3,596,082	100	35,961
2005[a,b]	36,060	377	6,314,036	64,429	11,280	115	55,070	562	10,917	111	6,427,363	98	65,585
Averages													
1985-04	73,811	734	11,563,215	116,711	766,174	7,622	652,916	6,548	351,877	3,517	13,357,993	99	134,661
1995-04	24,346	254	8,988,233	94,310	305,980	3,184	290,632	3,066	157,738	1,639	9,766,929	96	102,453
2000-04	15,692	159	6,529,647	66,918	151,197	1,564	133,290	1,399	82,945	869	6,912,771	98	70,909

[a] Includes the number of commercial permits that received income from the harvest. These figures do not include the department's test fishery harvests.

[b] The 2005 average exvessel values per pound were: Chinook- $0.62, sockeye- $0.88, coho- $0.21, pink- $0.11, chum- $0.18.

Table 36.-Number of subsistence permits issued, returned, and estimated subsistence salmon harvest, by species and year, 1980 through 2005.

	Permits		Estimated Salmon Harvest					
Year	Issued	Returned	Chinook	Sockeye	Coho	Chum	Pink	Total
1980	82	37	6	12,475	32	169	478	13,160
1981	29	7	0	2,049	0	0	0	2,049
1982	59	15	3	8,532	12	0	2	8,549
1983	32	21	0	3,078	1,319	850	1,250	6,497
1984	77	64	23	8,747	464	204	330	9,768
1985	59	48	1	7,177	50	25	26	7,279
1986	74	38	4	10,347	205	77	98	10,731
1987	2	1	0	400	0	0	0	400
1988	80	34	9	9,073	1,455	142	54	10,733
1989	68	23	24	7,551	384	147	81	8,187
1990	72	23	103	8,099	210	115	470	8,997
1991	95	58	42	11,483	13	81	275	11,894
1992	98	19	55	8,648	709	145	305	9,862
1993	201	141	122	14,710	3,765	642	1,265	20,504
1994	219	122	165	13,978	4,055	382	1,720	20,300
1995	111	95	98	9,563	1,191	150	723	11,725
1996	119	104	48	7,357	2,126	355	2,204	12,090
1997	126	103	28	13,442	2,678	840	2,035	19,023
1998	104	72	91	7,750	1,390	186	1,007	10,424
1999	106	88	243	9,040	1,679	136	1,191	12,289
2000	130	112	163	9,561	1,802	517	1,185	13,228
2001	135	122	171	8,633	1,859	213	2,787	13,663
2002	120	86	74	10,092	1,401	23	390	11,980
2003	146	127	267	10,989	2,256	286	1,597	15,395
2004	104	57	88	7,029	1,981	202	1,047	10,357
2005	119	100	224	8,171	2,112	353	730	11,590
Averages								
1985-04	108	74	90	9,246	1,460	233	923	11,953
1995-04	120	97	127	9,346	1,836	291	1,417	13,017
2000-04	127	101	153	9,261	1,860	248	1,401	12,925

Source: Alaska Department of Fish and Game, Division of Subsistence, Alaska Subsistence Fisheries Database.

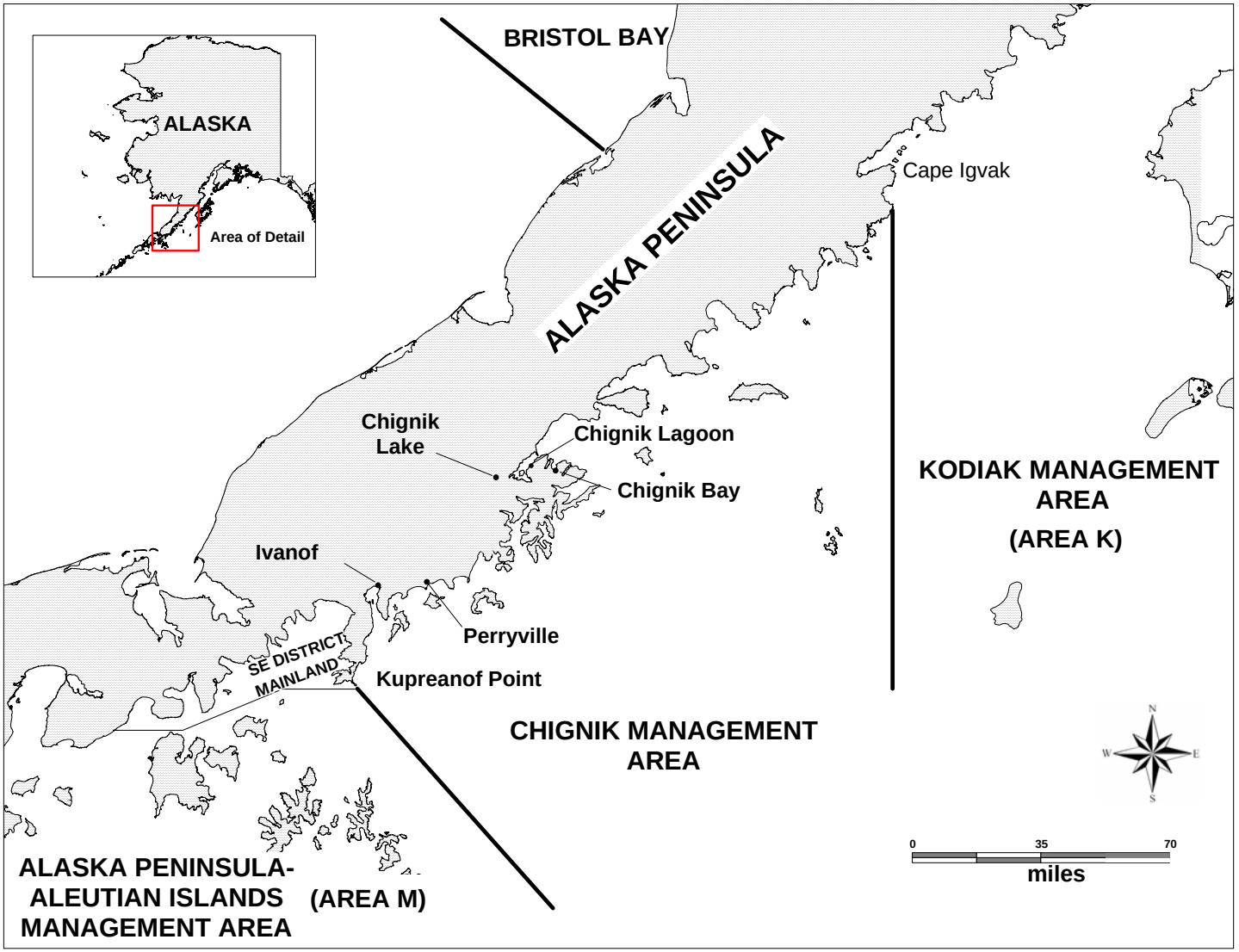

Figure 1.-Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula and Aleutian Islands Management Areas.

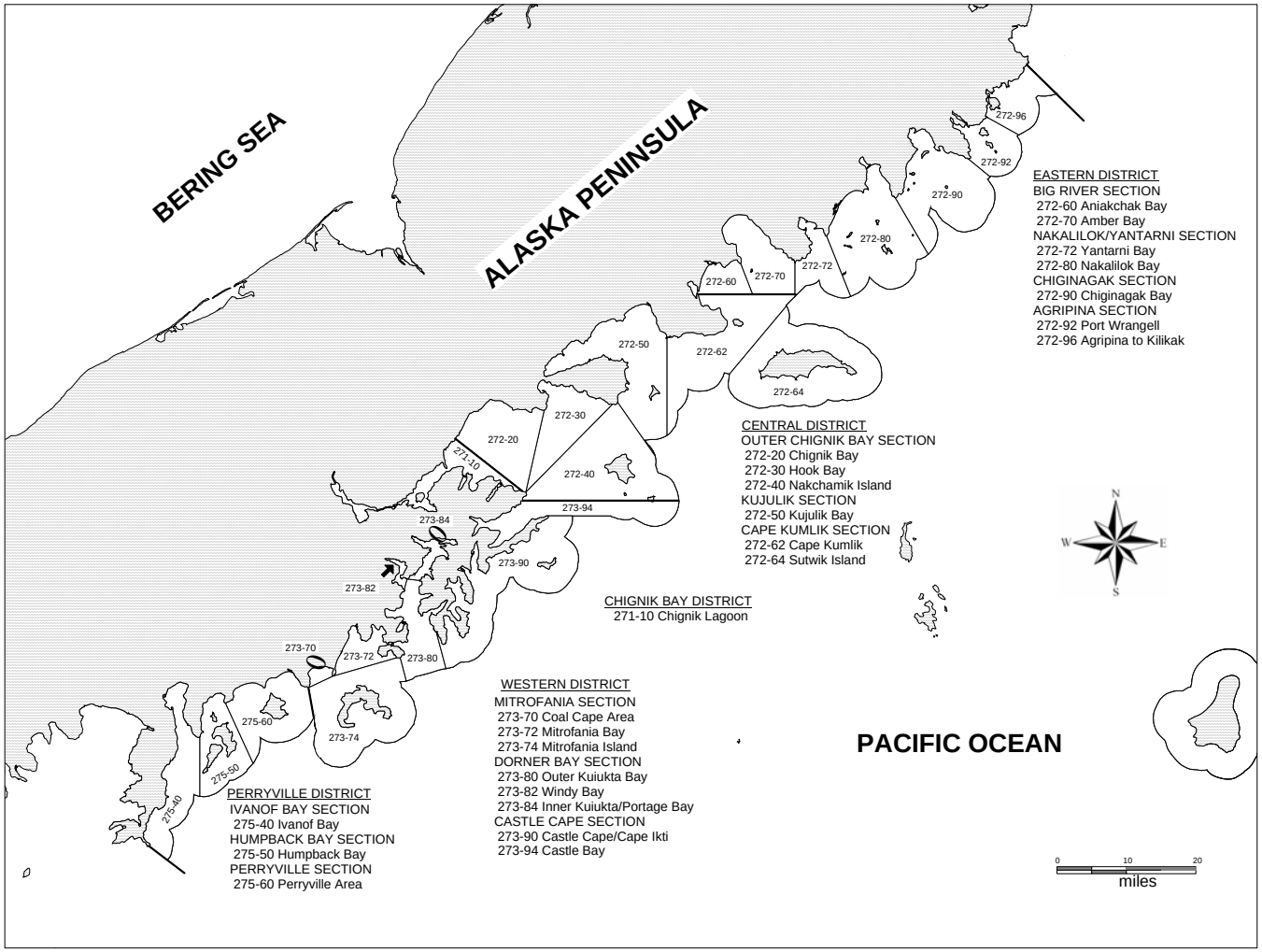

Figure 2.-Map of the Chignik Management Area illustrating district and section boundaries and statistical areas.

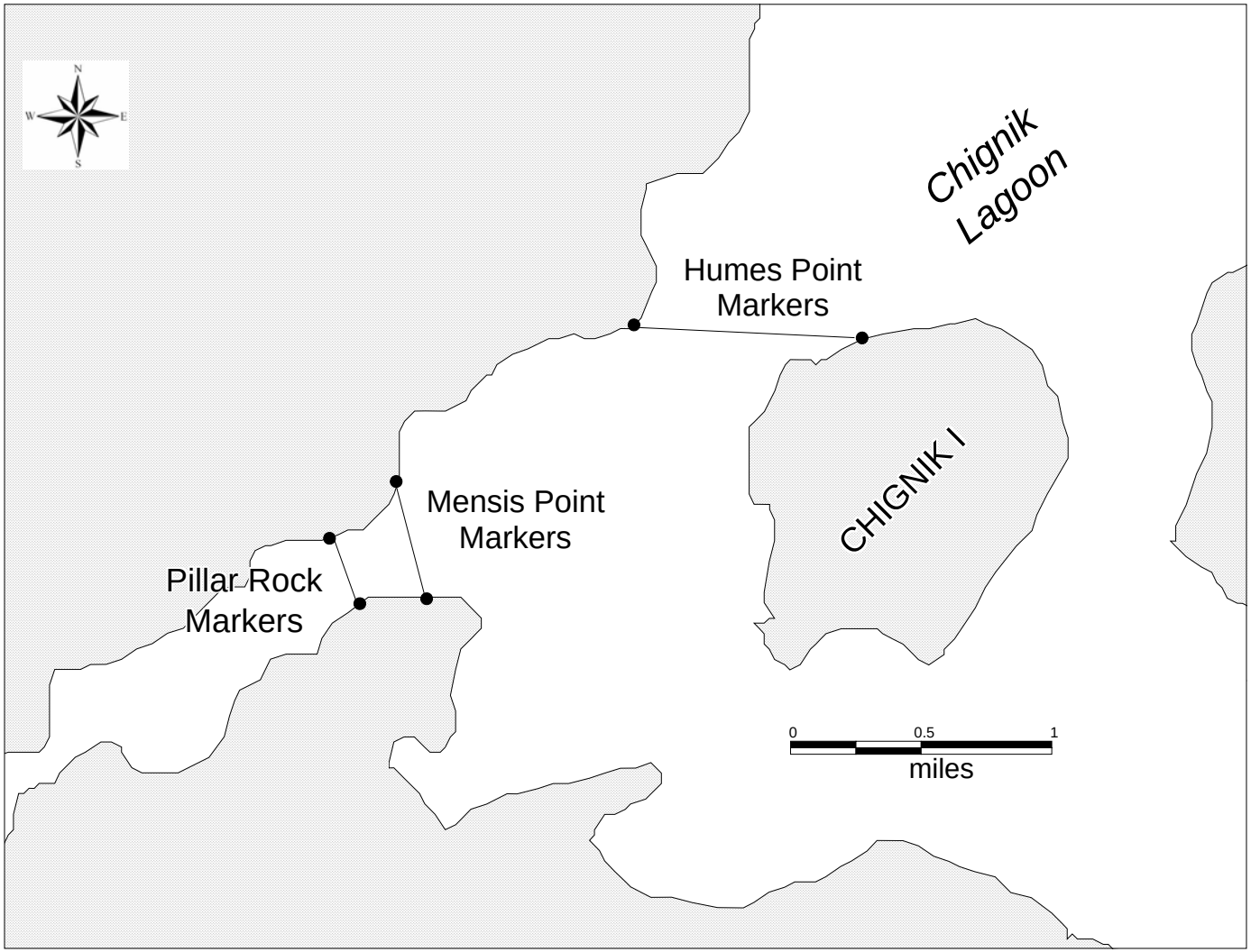

Figure 3.-Map of upper Chignik Lagoon showing the location of the Pillar Rock, Mensis Point, and Humes Point marker locations.

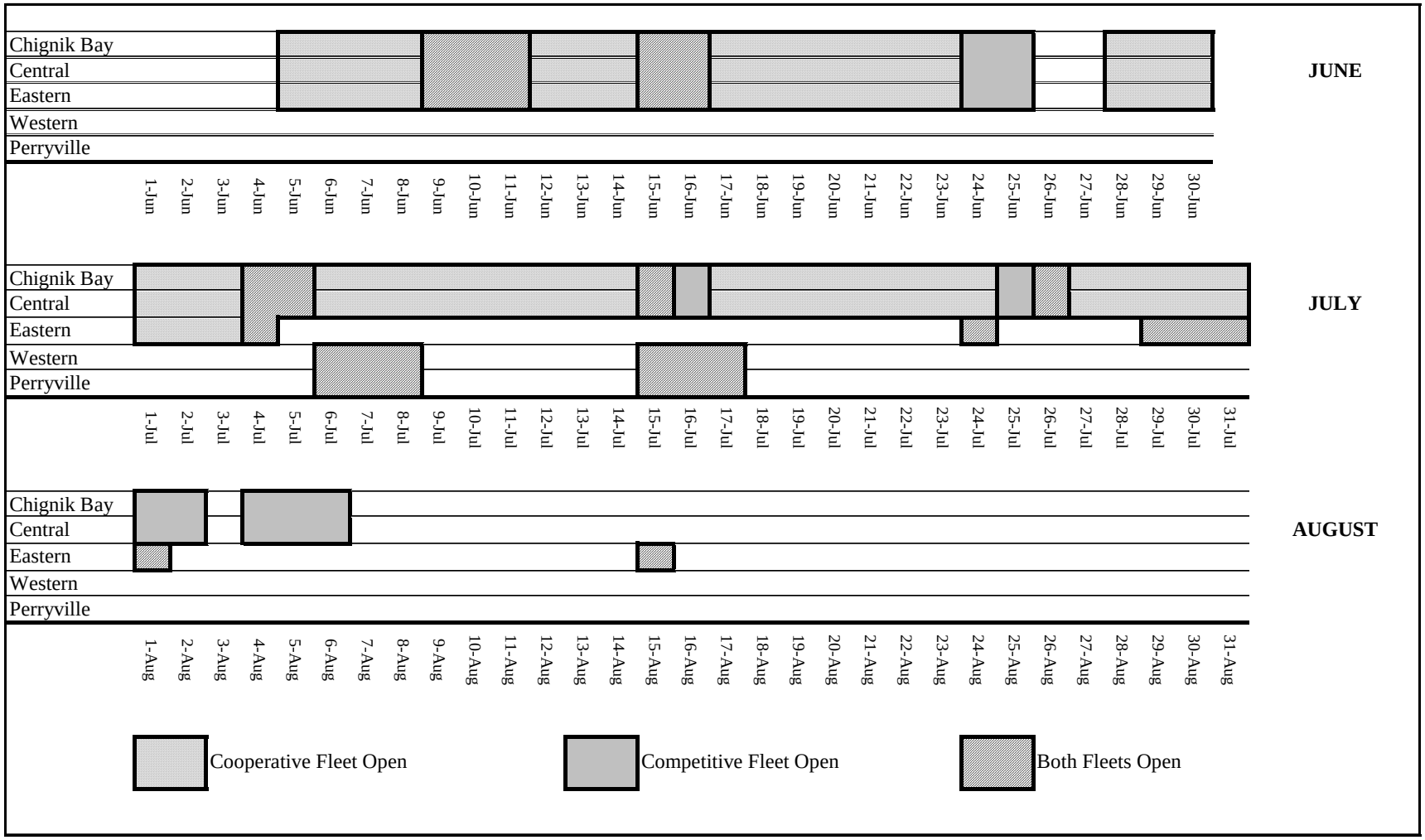

Figure 4.-Representation of days open to commercial salmon fishing, by district and fleet, by month, 2005.

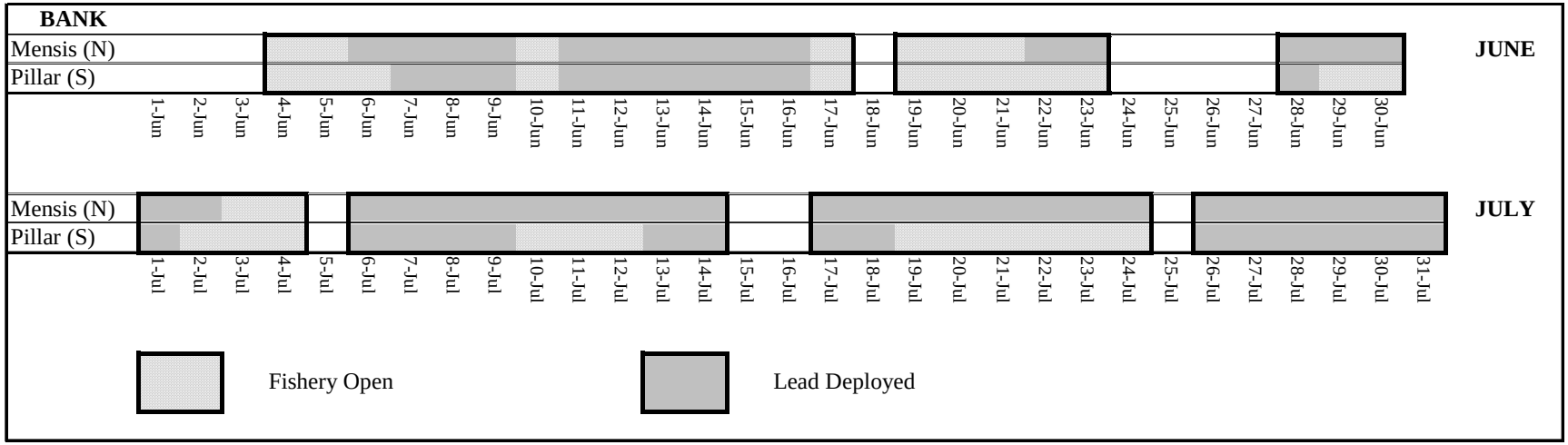

Figure 5.-Representation of fixed-leads use by the cooperative fleet, by day, for June and July 2005. There were no fixed-leads used in August 2005.

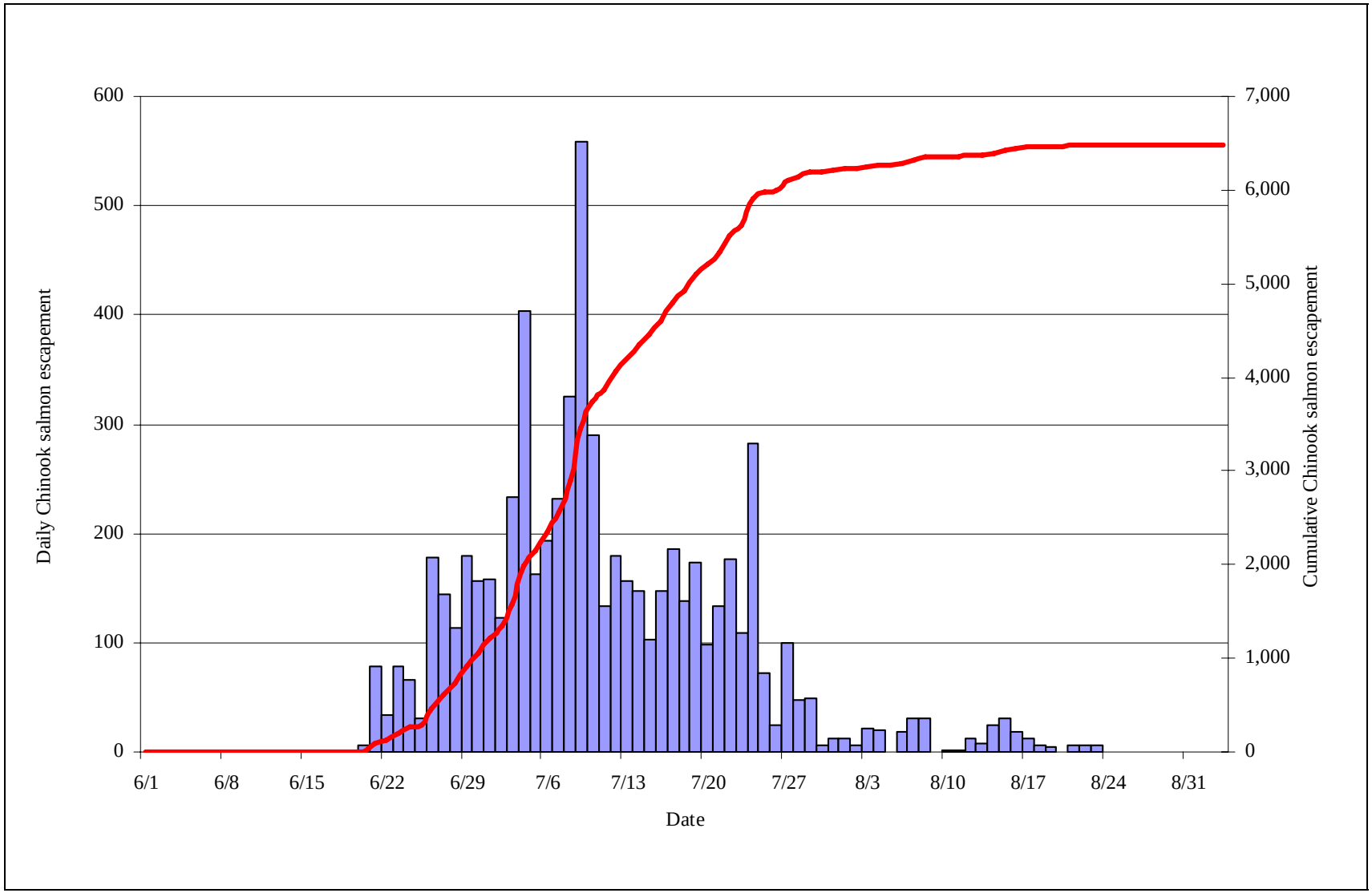

Figure 6.-Chignik River estimated daily (bars) and cumulative (line) Chinook salmon escapement, 2005.

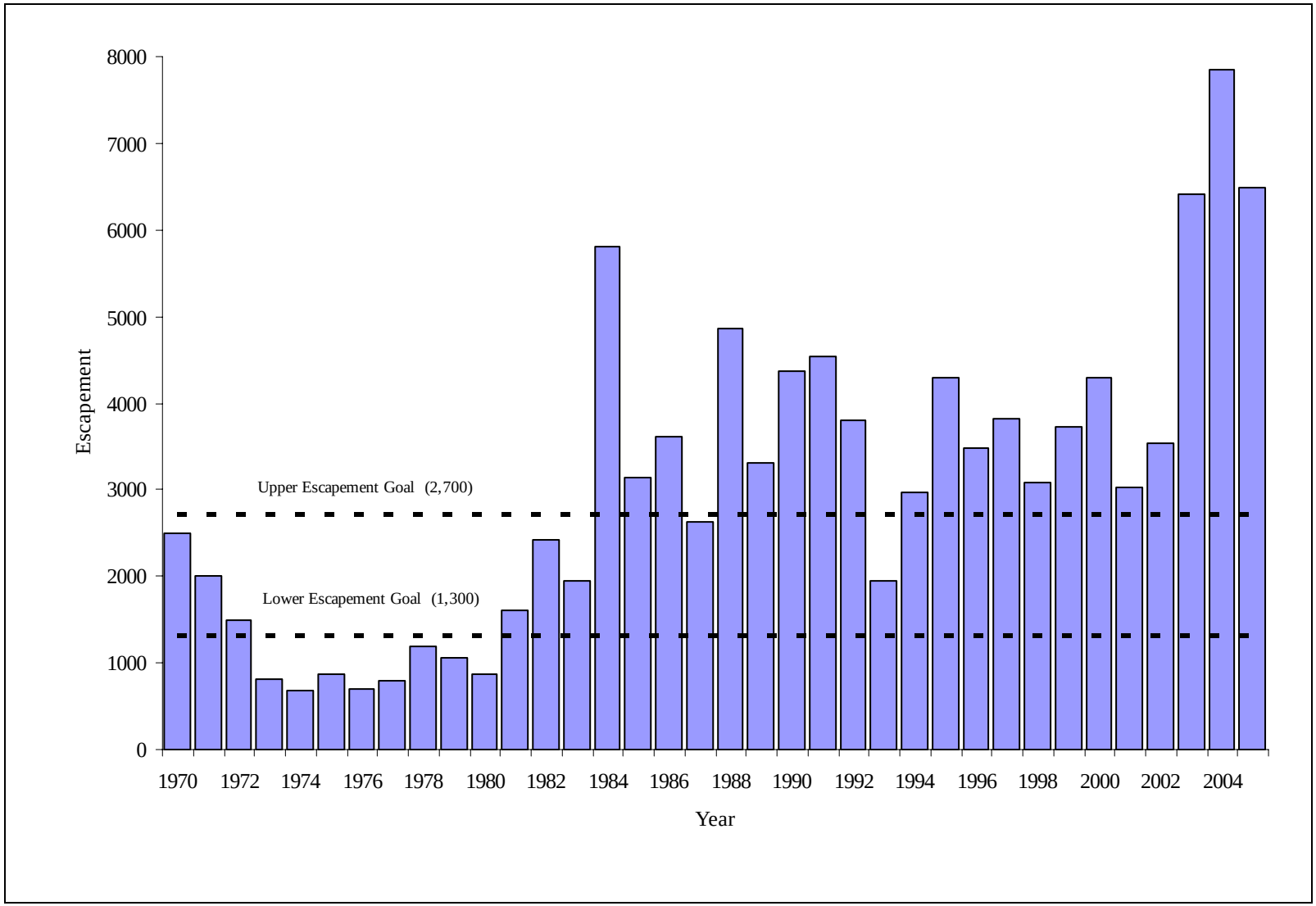

Figure 7.-Chignik River Chinook salmon escapement by year, 1970 through 2005, as compared to the 2005 escapement goal.

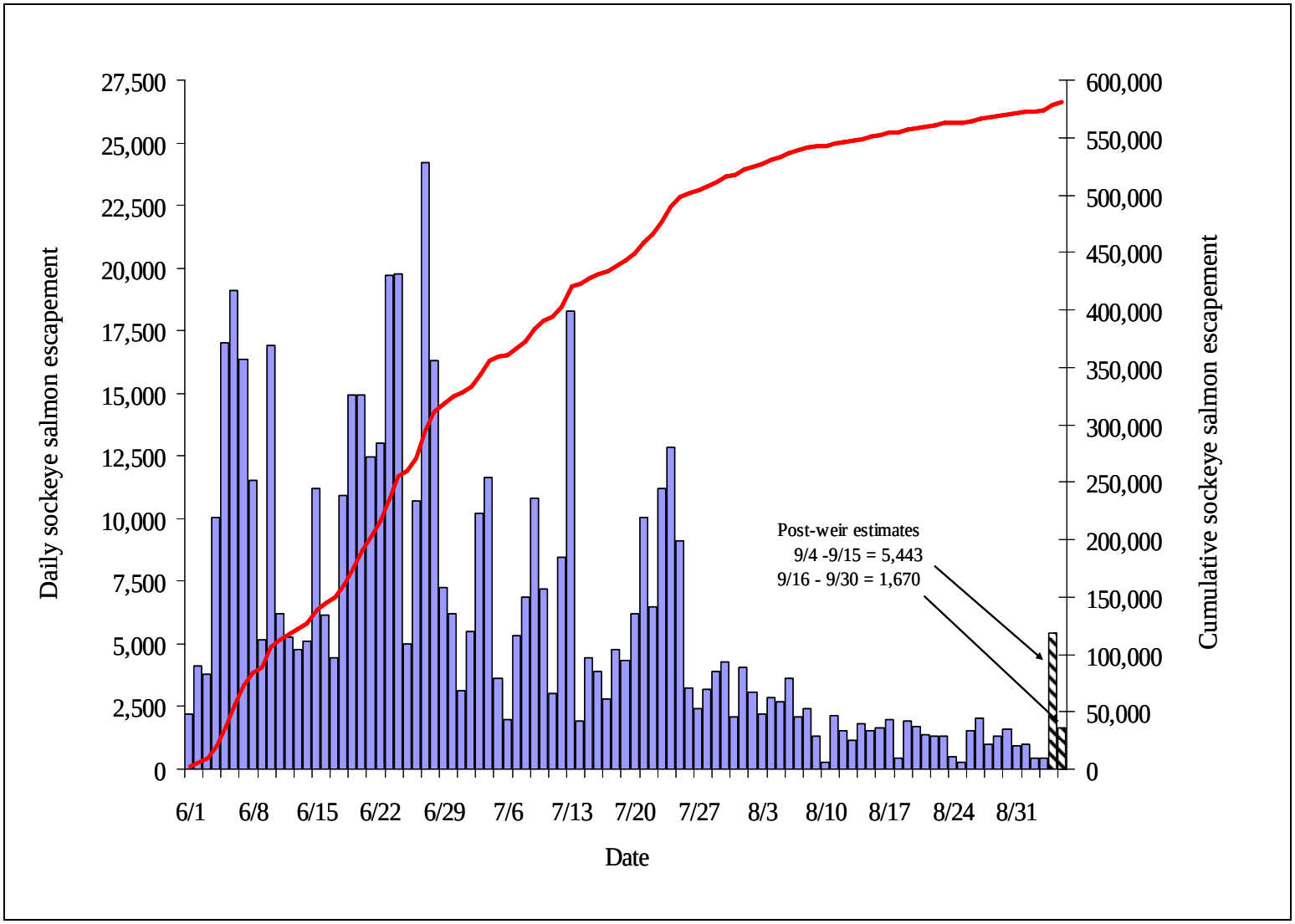

Figure 8.-Chignik River sockeye salmon daily (bars) and cumulative (line) escapement, 2005.

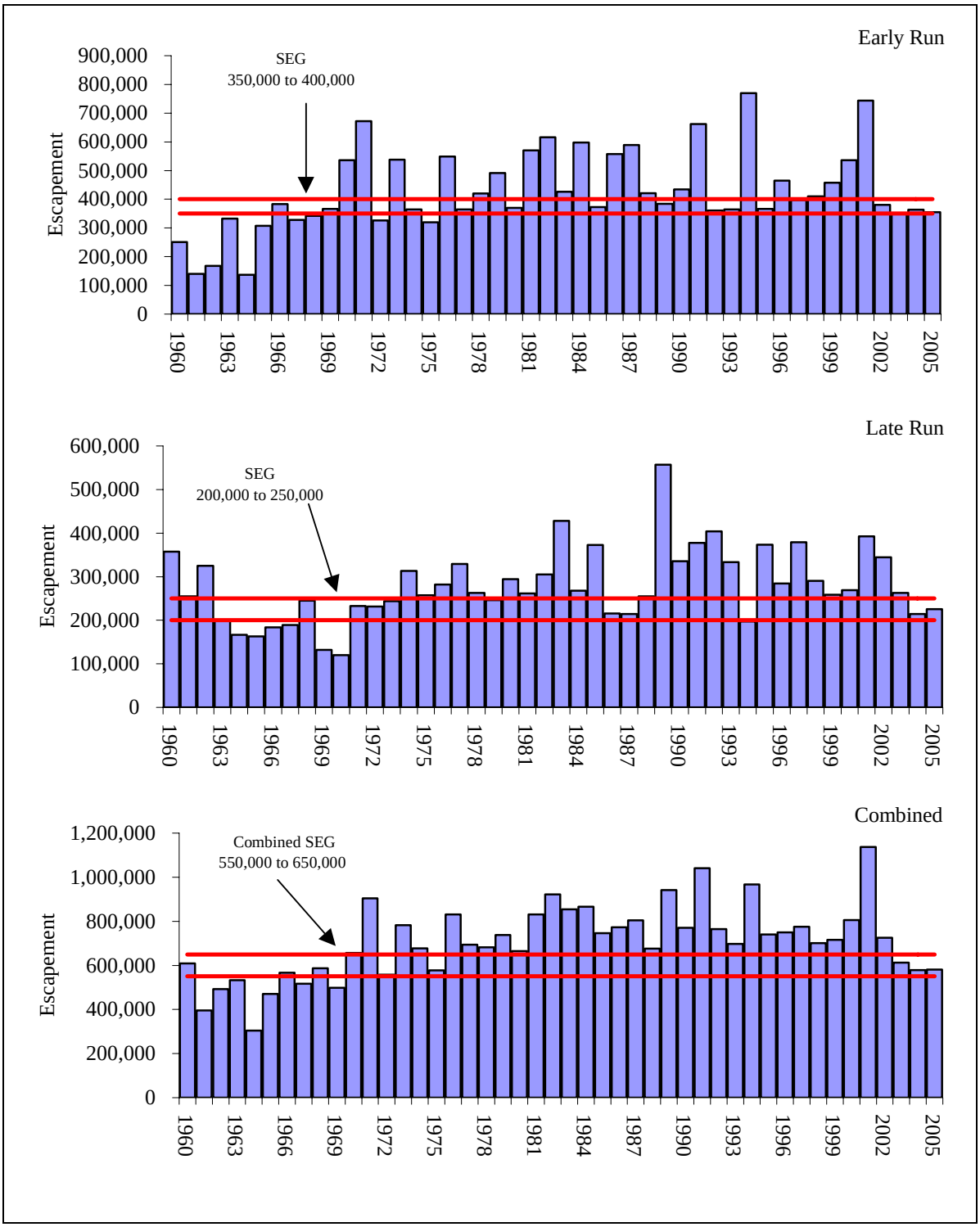

Figure 9.-Chignik River sockeye salmon early, late, and combined run escapements 1970 through 2005, compared to 2005 sustainable escapement goals (SEGs).

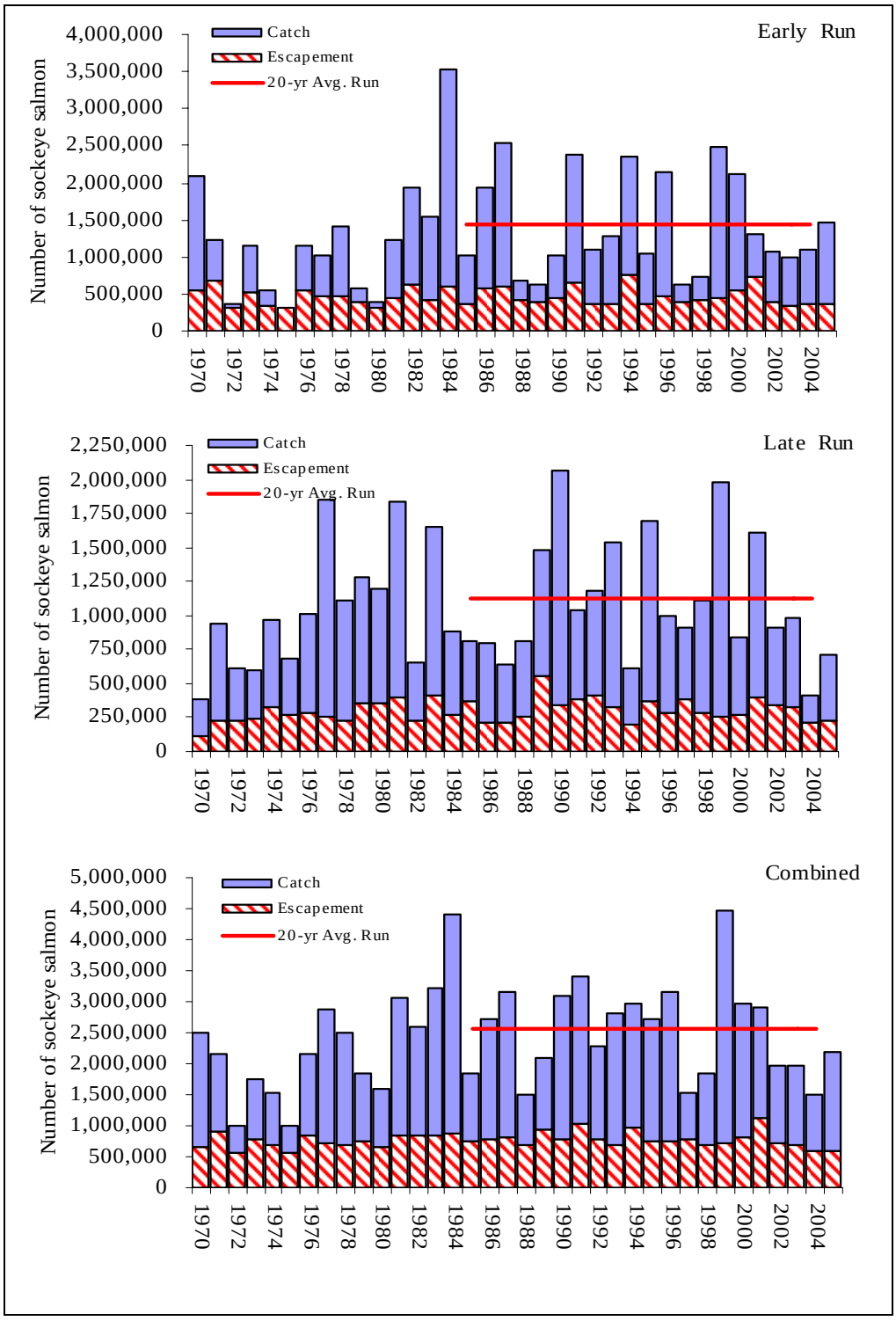

Figure 10.-Total sockeye salmon escapement (solid bars) and catch (striped bars) considered Chignik bound including home pack, the ADF&G's test fishery harvest, and Cape Igvak and SEDM allocations, by year and run, 1970 through 2005.

APPENDIX A. 2005 CHIGNIK COMMISSIONER'S PERMITS

Appendix A1.-Cooperative Commissioner's permit, 2005.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

FRANK MURKOWSKI, GOVERNOR

211 Mission Road
Kodiak, AK 99615
PHONE: (907) 486-1825
FAX: (907) 486-1841
Or
Chignik Weir
PO 40 Chignik Lake, AK 99548
PHONE: (907) 845-2243
FAX: (907) 845-2235

2005 CHIGNIK MANAGEMENT AREA COOPERATIVE SALMON FISHERY PERMIT

In accordance with 5 AAC 15.358, CHIGNIK AREA COOPERATIVE SALMON FISHERY MANAGEMENT PLAN**,** Chignik Management Area CFEC permit holders who intend to form an annual cooperative fishery must apply for a permit issued from the commissioner or the commissioner's designee.

By completing this form, the applicant indicates intent to form and operate a purse seine salmon cooperative fishery in the Chignik Management Area during 2005.

In addition to the provisions of 5 AAC 15.358, and current commercial salmon fishing regulations, the Cooperative agrees to the following permit terms and conditions:

Permit is valid from 12:01 AM June 1, to MIDNIGHT October 31, 2005.

A CFEC permit holder who registers as a member of the 2005 Chignik purse seine salmon cooperative fishery may not participate in any other commercial salmon net registration area as either a permit holder or crew member from June 1, 2005 through August 31, 2005 (5 AAC 15.358 (b)(7)(A)). Multiple salmon-permit holders must register for the Chignik Area (L) as their single area for commercial salmon fishing in 2005 (5 AAC 15.358 (b) (7) (B)).

A CFEC permit holder who registers as a member of the 2005 Chignik purse seine salmon cooperative fishery may only commercially salmon fish as part of the Chignik cooperative fleet and only during commercial fisheries that are open to the Chignik cooperative fleet.

At least one cooperative fleet CFEC permit holder (member) must be on board each purse seine vessel while fishing and delivering fish. Each member who will harvest fish for the cooperative must complete and submit a 2005 Vessel Operator Registration for the Chignik Management Area Cooperative Salmon Fishery.

-continued-

This cooperative fishery permit is subject to reconsideration and possible revocation if a distribution/patronage plan other than pro rata shares is adopted by the cooperative. A total of 76 CFEC Chignik Management Area permit holders registered to join the Chignik Area cooperative purse seine fleet for the 2005 season. By regulation (5 AAC 15.358 (d) (1)), each permit will add nine-tenths of one percent of the harvestable sockeye salmon surplus for each participant in the cooperative. The Chignik Area cooperative purse seine fleet will be allocated the harvest opportunity to take 76.77% of the total sockeye salmon harvest (there are a total of 99 Chignik CFEC salmon permits) during the 2005 Chignik Management Area commercial salmon fishing season.

Allocation of fishing opportunity between the cooperative and competitive fleets will be at the discretion of the department and will be secondary to escapement requirements or conservation concerns.

The Chignik Seafood Processors Alliance is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the goals of the Cooperative Fishery Management Plan, 5 AAC 15.358. The permittee shall notify ADF&G, Division of Commercial Fisheries, and obtain written approval in the form of a permit amendment before beginning any activity that significantly deviates from the approved plan and permits. Any action taken by the permittee or an agent of the permittee that increases the permit overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of ADF&G. Therefore, it is recommended that ADF&G, Division of Commercial Fisheries, be consulted immediately when a deviation from the approved plan is being considered.

This permit does not relieve the Chignik Seafood Processors Alliance, their contractors, agents, or other persons who perform their work from the responsibility for securing other permits that may be required, including local government, state, or federal permits.

This form must be completed, signed and returned prior to beginning cooperative fishing activities.

The attached list of 76 CFEC Chignik Area salmon permit holders (as of 5:00 PM May 16, 2005) have registered to join and form a cooperative that will participate in the Chignik Area commercial salmon purse seine fishery in 2005.

Cooperative Name: Chignik Seafood Processors Alliance (CSPA)

Cooperative Operator: Axel Kopun, President CSPA

Address:	Summer: P.O. Box 30	Winter: PO Box 773173
	Chignik Bay, AK 99564	Eagle River, AK 99577
	phone: (907) 749-2204	phone: (907) 622-6226

-continued-

CHIGNIK SEAFOOD PRODUCERS ALLIANCE DATE

ADF&G REPRESENTATIVE DATE

Processor(s) the cooperative will sell harvested salmon to (if known):

Return completed form to: Alaska Department of Fish and Game
Division of Commercial Fisheries
Kenneth A. Bouwens
211 Mission Road
Kodiak, AK 99615

CSPA MEMBERSHIP LIST AS OF MAY 16, 2005

	Permit Holder Name:	Permit Number:	Interim/Permanent:
1)	Christine Alexander	SO1L 59000W	Permanent
2)	Aaron Anderson	SO1L 56203U	Permanent
3)	David Anderson	SO1L 56415U	Permanent
4)	Dean Anderson	SO1L 60114M	Permanent
5)	Gene Anderson	SO1L 60601G	Permanent
6)	George Anderson	SO1L 57133E	Permanent
7)	Gary Anderson	SO1L 57501K	Permanent
8)	Julius Anderson Jr	SO1L 55433H	Permanent
9)	Malcolm Brown	SO1L 55938M	Permanent
10)	Don Bumpus	SO1L 61910L	Permanent
11)	Allen Burkhard	SO1L 56935J	Permanent
12)	Katie Butler	SO1L 57695S	Permanent
13)	Robert Cameron	SO1L 58603C	Permanent
14)	Carl Carlson	SO1L 56192Z	Permanent
15)	Gene Carlson	SO1L 55520P	Permanent
16)	Roderick Carlson	SO1L 57704F	Permanent
17)	Johnny Constantine	SO1L 57808I	Permanent
18)	Clarence Erickson	SO1L 56512B	Permanent
19)	Raymond Erickson	SO1L 62210Z	Permanent
20)	Timothy Gervais	SO1L 58077F	Permanent

-continued-

21)	Tony Gregorio	SO1L 58848X	Permanent
22)	Randy Hansen	SO1L 55954N	Permanent
23)	Arne Hatch	SO1L 60183F	Permanent
24)	Raechel Hinderer	SO1L 57376O	Permanent
25)	Wally Hinderer	SO1L 57085S	Permanent
26)	David Horn	SO1L 55399O	Permanent
27)	Archie Kalmakoff	SO1L 55361H	Permanent
28)	Joe Kalmakoff	SO1L 60614G	Permanent
29)	Frank Kashevarof Jr	SO1L 57487N	Permanent
30)	Aloys Kopun Jr	SO1L 57863I	Permanent
31)	Axel Kopun	SO1L 57612J	Permanent
32)	Patrick Kosbruk	SO1L 58206U	Permanent
33)	Harry Kosbruk	SO1L 56726L	Permanent
34)	Ivan Kosbruk	SO1L 50116R	Interim
	(emergency transfer from the estate of Ignatius Kosbruk)		
35)	Stephen Kulin	SO1L 60113U	Permanent
36)	Elliot Lind	SO1L 56872O	Permanent
37)	Johnny Lind	SO1L 50223W	Interim
38)	Mitchell Lind	SO1L 57384C	Permanent
39)	Brett Lounsbury	SO1L 58322F	Permanent
40)	Dan Mershon	SO1L 61370V	Permanent
41)	Josh Mershon	SO1L 58818F	Permanent
42)	Kerry Nelson	SO1L 58425P	Permanent
43)	Les Nunn	SO1L 58578P	Permanent
44)	Leonard Ogle	SO1L 55311R	Permanent
45)	Jeff Olsen	SO1L 60115F	Permanent
46)	Knud Olsen	SO1L 56418W	Permanent
47)	George Orloff	SO1L 59308M	Permanent
48)	Alvin Pedersen	SO1L 55953V	Permanent
49)	Hans Pedersen Jr	SO1L 57171K	Permanent
50)	Sharon Pedersen	SO1L 58126H	Permanent
51)	Bruce Petska	SO1L 59794I	Permanent
52)	John Phillips	SO1L 50332L	Interim
	(emergency transfer from the estate of Elia Phillips)		
53)	Daryl Rietveld	SO1L 57469C	Permanent
54)	Jamie Ross	SO1L 60106Z	Permanent
55)	Roger Rowland	SO1L 63976A	Permanent
56)	Dennis Shangin	SO1L 58178G	Permanent
57)	Edgar Shangin	SO1L 57003B	Permanent
58)	Russell Shangin	SO1L 52949G	Interim
	(emergency transfer from the estate of Peter Phillips)		
59)	Stephen Shangin	SO1L 57296B	Permanent
60)	Norma Shellgren	SO1L 51556R	Interim
	(emergency transfer from the estate of Frank Battishill)		
61)	Matt Siemion	SO1L 56992S	Permanent
62)	Ted Siemion	SO1L 56322H	Permanent
63)	Arnold Skonberg	SO1L 55477R	Permanent
64)	Calvin Skonberg	SO1L 56228C	Permanent
65)	Minnie Skonberg	SO1L 58470R	Permanent
66)	Ralph Skonberg	SO1L 50205L	Interim
67)	Tina Skonberg	SO1L 55546P	Permanent
68)	Oleana Stepanoff	SO1L 58308N	Permanent

-continued-

69)	Walter Stepanoff Jr	SO1L 57091W	Permanent
70)	Glenn Suydam	SO1L 59615J	Permanent
71)	Lowell Suydam	SO1L 56680K	Permanent
72)	Annette Takak	SO1L 57035F	Permanent
73)	Paul Teuber	SO1L 60121I	Permanent
74)	Dan Veerhusen	SO1L 57662X	Permanent
75)	Tim Wilkie	SO1L 64187U	Permanent
76)	Jerry Yagie	SO1L 56797N	Permanent

-END-

Appendix A2.-Fixed-leads Commissioner's permit, 2005.

-

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

FRANK MURKOWSKI, GOVERNOR

211 Mission Road
Kodiak, AK 99615
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Or
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PO 40 Chignik Lake, AK 99548
PHONE: (907) 845-2243
FAX: (907) 845-2235

2005 CHIGNIK MANAGEMENT AREA COMMISSIONER'S PERMIT
COOPERATIVE SALMON FIXED LEADS

NAME: Chignik Seafood Producers Alliance (CSPA) ADF&G # 2005-1

OPERATOR: Axel Kopun, President CSPA

ADDRESS: Summer: P.O. Box 30 Winter: PO Box 773173
Chignik Bay, AK 99564 Eagle River, AK 99577
phone: (907) 749-2204 phone: (907) 622-6226

In addition to current Chignik Management Area salmon commercial fishing regulations, participants agree to the following conditions:

1) Permit is valid from 12:01 AM June 1, to MIDNIGHT October 31, 2005.

2) 5 AAC 15.359 (c) allows, through a commissioner's permit, for CSPA to operate two fixed leads in the Chignik Management Area located in Chignik Lagoon.

3) The area between the Mensis Point (5 AAC 15.350 (1)(C)) and the Pillar Rock (5 AAC 15.350 (1)(D)) markers shall be known as the "Pillar Rock Harvest Area". One lead may be attached to the beach at approximately the high tide mark at approximately 56° 16.74' N. lat., 158° 39.01'W. long., and a second lead may be attached to the beach at approximately the high tide mark at approximately 56° 16.57' N. lat., 158° 38.84' W. long. within the Pillar Rock Harvest Area.

4) (a) The lead attached to the Mensis Point shoreline may be up to 225 fathoms in length and no more than 100 meshes in depth. A purse seine may not be attached to this lead.

(b) The lead attached to the Pillar Rock shoreline may be up to 125 fathoms in length and may be no more than 100 meshes in depth. A purse seine may be attached to this lead.

-continued-

5) Each lead shall be made of seine webbing, with meshes no greater than 4 inches stretch measure.

6) Each lead must have a corkline and a leadline and may be anchored at appropriate intervals for the purpose of holding its position.

7) A distance of at least 100 feet of open space must always be provided for between the leads in the main channel of the river as measured at the upstream-most corners of the leads. There may be less than 100 feet of open space between the leads and purse seine gear provided that access for vessel traffic is maintained.

8) Each lead corkline must have operating white lights at night every ten fathoms along the entire length of the corkline, and have appropriate operating port (red) and starboard (green) lights on the seaward end of the leads to mark the navigable channel between the leads.

9) The ADF&G may verbally request the removal of the leads at any time; upon the removal request by ADF&G, the operator must completely remove the leads from the water within two hours.

10) The leads may be installed in the water at the beginning of each cooperative fishing period. The leadline of each lead shall be raised from the bottom and secured to the corkline in at least five places prior to the closure of each cooperative fishing period.

11) At night when a purse seine is attached to a lead, the vessel must display an appropriate red mast light to indicate fishing or a white light to indicate anchoring and there must be at least two white lights placed along the purse seine between the purse seine vessel and the lead.

12) In the Chignik Management Area, a vessel may have a purse seine or hand purse seine aboard as described in 5 AAC 15.332 and a total of two fixed leads aboard as they are described in this permit.

13) When the ADF&G restricts the salmon catch of the cooperative by imposing a daily harvest limit, the cooperative may fully deploy the leads at 12:01 AM of the harvest limit day. When the ADF&G daily harvest limit has been harvest, the cooperative must minimize impediments to fish migrations by tying the lead leadline to the corkline.

14) An ADF&G observer may sample and measure all catch and bycatch of the leads and the harvesting vessel's seine. The vessel operator and crew must exercise patience and slow the pace of fishing, if required, to accommodate the accurate collection of all data required from the ADF&G observer.

15) Participants will notify ADF&G in Chignik daily prior to commencement of lead operation and at the conclusion of lead operation.

-continued-

16) The Chignik Seafood Producers Alliance will provide ADF&G a logbook for each lead specifying, on a daily basis, the time each lead is fishing, repairs, alterations, maintenance (cleaning), and other data as requested by ADF&G.

17) Vessels must adhere to all commercial fishing and landing requirements.

18) The Chignik Seafood Processors Alliance is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the goals of this permit and the cooperative fishery management plan, 5 AAC 15.359. The permittee shall notify ADF&G, Division of Commercial Fisheries, and obtain written approval in the form of a permit amendment before beginning any activity that significantly deviates from the approved plan and permits. Any action taken by the permittee or an agent of the permittee that increases the permit overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of ADF&G. Therefore, it is recommended that ADF&G, Division of Commercial Fisheries, be consulted immediately when a deviation from the approved permit is being considered.

19) This permit does not relieve the Chignik Seafood Processors Alliance, their contractors, agents, or other persons who perform their work from the responsibility for securing other permits: state, federal, or local.

20) When the leads are deployed in any manner a cooperative CFEC permit holder must be present at all times within the Pillar Rock Harvest Area.

21) This permit may be modified or voided by the ADF&G at any time.

I _____, for the Board of Directors of the Chignik Seafood Producers Alliance, hereby authorize the release of confidential fish ticket harvest information that results from my participation in the 2004 Chignik Management Area salmon fishery. I understand this information will be used for reporting of stock condition on Chignik Management Area salmon and any effects the lead may have on the salmon stocks and habitat in Chignik Lagoon. I also agree to abide by all permit terms stated above.

_____ _____

CHIGNIK SEAFOOD PRODUCERS ALLIANCE DATE

_____ _____

ADF&G REPRESENTATIVE DATE

Appendix A3.-Commissioner's permit to authorize the use of net pens by the cooperative fleet, 2005.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

FRANK MURKOWSKI, GOVERNOR

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Or
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PO 40 Chignik Lake, AK 99548
PHONE: (907) 845-2243
FAX: (907) 845-2235

2005 CHIGNIK MANAGEMENT AREA COMMISSIONER'S PERMIT
COOPERATIVE SALMON NET PEN REQUIREMENTS

NAME: Chignik Seafood Producers Alliance (CSPA) ADF&G # 2005-4

OPERATOR: Axel Kopun, President

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In addition to current Chignik Management Area salmon commercial fishing regulations, participants agree to the following conditions:

1) Permit is valid from 12:01 AM June 1, to MIDNIGHT October 31, 2005.

2) 5 AAC 15.359 (h) allows, through a commissioner's permit, for the Chignik Seafood Producers Alliance (CSPA) to operate net pens to hold live, commercially captured salmon; thus net pens will only be allowed in Chignik Lagoon under provisions of this permit. Fishing and tendering vessels (i.e., vessels that operate under their own power, that have a licensed skipper aboard, and with fish holds that are not directly open to the sea) may contain live fish, for up to three days after their capture, without the need of a commissioner's permit.

3) The CSPA will notify the Chignik ADF&G when fish pens are deployed in Chignik Lagoon and when they contain fish, except for fish pens that are attached to the Norquest Seafoods Inc., facilities or a mooring owned by Norquest Seafoods Inc., in Anchorage Bay (56° 18'N.lat., 158° 24'W. long), Chignik as permitted under permit ADF&G # 2005-3. CSPA will provide Chignik ADF&G a daily estimate of the number and pounds of salmon, by species, in each fish pen.

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4) This permit allows the use of fish pens for holding live salmon for up to three days after being captured in the Chignik District commercial salmon fishery. The net pens may be operated and moored in Chignik Lagoon. Towing pens that contain live salmon caught in the Chignik District, within the Chignik District is allowed.

5) A total of up to two fish pens will be allowed within Chignik Lagoon in the Chignik Bay District. Individual fish pens may be up to 40 feet in length, 40 feet in width, and 100 meshes deep. The fish pen mesh size may be no greater than four inches. Lights, decks, fences, and other structural supports may be attached to the fish pens. The fish pens may be attached to each other.

6) An ADF&G observer may sample and measure all catch and bycatch contained in the fish pens. The fish pen operator and crew must exercise patience and slow the pace of processing, if required, to accommodate the accurate collection of all data required from the ADF&G observer.

7) Catcher, tender, and processing vessels must adhere to all other commercial fishing and landing requirements.

8) Fish pens must not interfere with the open fishery as defined in 5 AAC 15.359 (j)(2) or with subsistence fishermen.

9) The Chignik Seafood Processors Alliance is responsible for the actions of contractors, agents, or other persons who perform work to accomplish the goals of this permit. The permittee shall notify ADF&G, Division of Commercial Fisheries, and obtain written approval in the form of a permit amendment before beginning any activity that significantly deviates from the approved plan and permits. Any action taken by the permittee or an agent of the permittee that increases the permit overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved permit. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of ADF&G. Therefore, it is recommended that ADF&G, Division of Commercial Fisheries, be consulted immediately when a deviation from the approved permit is being considered.

10) This permit does not relieve the Chignik Seafood Processors Alliance their contractors, agents, or other persons who perform their work from the responsibility for securing other permits: state, federal, or local.

11) All fish in a fish pen are considered harvested for all catch reporting and allocative concerns.

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12) This permit may be modified or voided by the ADF&G at any time.

I _____, for the Board of Directors of the Chignik Seafood Producers Alliance, hereby authorize the release of confidential fish ticket harvest information that results from my participation in the 2005 Chignik Management Area salmon fishery. I understand this information will be used for reporting of stock condition on Chignik Management Area salmon. I also agree to abide by all permit terms stated above.

_____ _____

CHIGNIK SEAFOOD PRODUCERS ALLIANCE DATE

_____ _____

ADF&G REPRESENTATIVE DATE

APPENDIX B. SUMMARY OF 2005 EMERGENCY ORDERS

Appendix B1.-Summary of the 2005 Chignik Management Area Emergency Orders.

E.O. Number	Issued	Effective	Action taken
4-FS-L-01-05	6:00 PM 6/4/2005	3:00 PM 6/5/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 3:00 PM Sunday, June 5 until 3:00 PM Tuesday, June 7 for the cooperative fleet. **Closed Waters** Effective 3:00 PM June 5 the closed waters of upper Chignik Lagoon include those waters west of Humes Point. Effective 3:00 PM Monday June 6, the closed waters of upper Chignik Lagoon will be reduced to include only those waters west of Pillar Rock.
4-FS-L-02-05	4:00 PM 6/6/2005	3:00 PM 6/7/2006	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay, Central, and Eastern districts for 51 hours from 3:00 PM Tuesday, June 7 until 6:00 PM Thursday, June 9.
4-FS-L-03-05	4:00 PM 6/7/2005	8:00 PM 6/9/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 8:00 PM Thursday, June 9 until 8:00 PM Saturday, June 11 for the competitive fleet. **Closed Waters** Effective 3:00 PM June 5 the closed waters of upper Chignik Lagoon include those waters west of Mensis Point. **Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 8:00 PM Thursday, June 9 until 8:00 PM Saturday, June 11 for the cooperative fleet between the Pillar Rock and Mensis Point markers
4-FS-L-04-05	4:30 PM 6/10/2005	9:00 PM 6/11/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 9:00 PM Saturday, June 11 until 9:00 PM Monday, June 13 for the cooperative fleet. The Chignik Lagoon markers will be located at Pillar Rock
4-FS-L-05-05	9:30 AM 6/13/2005	9:00 PM 6/13/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay, Central, and Eastern districts for 48 hours from 9:00 PM Monday, June 13 until 10:00 AM Wednesday, June 15.
4-FS-L-06-05	1:00 PM 6/14/2005	12:00 PM 6/15/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 33 hours from 12:00 NOON Wednesday, June 15 until 9:00 PM Thursday, June 16 for the competitive fleet. **Closed Waters** Effective 5:00 AM June 18, the closed waters of upper Chignik Lagoon include those waters west of Mensis Point.
4-FS-L-07-05	12:00 PM 6/16/2005	10:00 PM 6/16/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 10:00 PM Thursday, June 18 until 10:00 PM Saturday, June 18 for the cooperative fleet. **Closed Waters** Effective 10:00 PM June 16, the closed waters of upper Chignik Lagoon include those waters northwest of Pillar Rock.
4-FS-L-08-05	12:30 PM 6/18/2005	10:00 PM 6/18/2005	**Extends** the Chignik Bay, Central, and Eastern districts for 65 hours from 10:00 PM Saturday, June 18 until 3:00 PM Tuesday, June 21 for the cooperative fleet.
4-FS-L-09-05	3:00 PM 6/20/2005	3:00 PM 6/21/2005	**Extends** the Chignik Bay, Central, and Eastern districts for 49 hours from 3:00 PM Tuesday, June 21 until 4:00 PM Thursday, June 23 for the cooperative fleet.
4-FS-L-10-05	5:00 PM 6/22/2005	6:00 AM 6/24/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 24 hours from 6:00 AM Friday, June 24 until 6:00 AM Saturday, June 25 for the competitive fleet. **Closed Waters** Effective 6:00 AM June 24 the competitive fleet may only take salmon in waters northeast of Mensis Point.

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E.O. Number	Issued	Effective	Action taken
4-FS-L-11-05	5:00 PM 6/27/2005	12:00 PM 6/28/2005	**Opens** the Chignik Bay, Central, and Eastern districts for 48 hours from 12:00 PM Tuesday, June 28 until 12:00 PM Thursday, June 30 for the cooperative fleet. **Closed Waters** Effective 12:00 PM June 24 the competitive fleet may only take salmon in waters northeast of Pillar Rock.
4-FS-L-12-05	5:00 PM 6/29/2005	12:00 PM 6/30/2005	**Extends** the Chignik Bay, Central, and Eastern districts for 48 hours from 12:00 PM Thursday, June 30 until 12:00 PM Saturday, July 2 for the cooperative fleet.
4-FS-L-13-05	4:00 PM 7/1/2005	12:00 PM 7/2/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay, Central, and Eastern districts for 50 hours from 12:00 NOON Saturday, July 2 until 2:00 PM Monday, July 4.
4-FS-L-14-05	6:00 PM 7/2/2005	4:00 PM 7/4/2005	**Opens** the Chignik Bay, and Central districts for 24 hours from 4:00 PM Monday, July 4 until 4:00 PM Thursday, July 5 for the competitive fleet. **Closed Waters** Effective 4:00 PM July 4, the competitive fleet may only take salmon in those waters northeast of Mensis Point in the Chignik Bay District. **Opens** portions of the Chignik Bay, Central, Western and Perryville districts south of the Cape Iki line, outside of Ivanof Bay, and within Jack's box for 48 hours from 12:00 PM Wednesday, July 6 until 12:00 PM Friday, July 8 for both fleets.
4-FS-L-15-05	3:00 PM 7//2005	6:00 PM 7/5/2005	**Opens** the Chignik Bay, and Central districts for 48 hours from 6:00 PM Tuesday, July 5 until 6:00 PM Thursday, July 7 for the cooperative fleet. **Closed Waters** Effective 6:00 PM July 5, the cooperative fleet may only take salmon in those waters northeast of Pillar Rock in the Chignik Bay District.
4-FS-L-16-05	9:30 AM 7/7/2004	6:00 PM 7/7/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay and Central districts for 96 hours from 6:00 PM Thursday, July 7 until 6:00 PM Monday, July 11.
4-FS-L-17-05	6:30 PM 7/10/2005	6:00 PM 7/11/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay and Central districts for 74 hours from 6:00 PM Monday, July 11 until 8:00 PM Thursday, July 14.
4-FS-L-18-05	9:00 AM 7/13/2005	8:00 PM 7/16/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay and Central districts for 13 hours from 8:00 PM Tuesday, July 14 until 9:00 AM Friday, July 15. **Opens** the Chignik Bay, and Central districts for 24 hours from 11:00 AM Friday, July 15 until 11:00 AM Saturday, July 16 for the competitive fleet. **Opens** portions of the Chignik Bay, Central, Western and Perryville districts south of the Cape Iki line, outside of Ivanof Bay, and within Jack's box for 48 hours from 12:00 PM Friday, July 15 until 12:00 PM Sunday, July 17 for both fleets. **Closed Waters** Effective 8:00 PM July 14, the cooperative fleet may only take salmon in those waters northeast of Pillar Rock in the Chignik Bay District. Effective 11:00 AM July 15, the competitive fleet may only take salmon in those waters northeast of Mensis Point in the Chignik Bay District.
4-FS-L-19-05	2:30 PM 7/19/2005	11:59 PM 7/19/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay and Central districts for 13 hours from 11:00 AM Saturday, July 16 until 11:59 PM Saturday, July 16.

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E.O. Number	Issued	Effective	Action taken
4-FS-L-20-05	9:15 AM 7/19/2005	11:59 PM 7/19/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay, Central, and Eastern districts for 72 hours from 11:59 PM Tuesday, July 19 until 11:59 PM Friday, July 22.
4-FS-L-21-05	9:00 AM 7/22/2005	11:59 PM 7/22/2005	**Extends** the current commercial salmon fishing period for the cooperative fleet in the Chignik Bay, Central, and Eastern districts for 48 hours from 11:59 PM Friday, July 22 **Opens** the Chignik Bay and Central districts for 24 hours from 7:00 AM Monday, July 25 until 7:00 AM tuesday, July 26 for the competitive fleet. **Closed Waters** Effective 7:00 AM July 25, the competitive fleet may only take salmon in those waters northeast of Mensis Point in the Chignik Bay District.
4-FS-L-22-05	4:15 PM 7/23/2005	12:01 AM 7/24/2005	**Opens** those protions of the Eastern District within Amber Bay from 12:01 AM Sunday, July 24 to 12:01 AM Monday, July 25 for both fleets. **Closed Waters** Effective 12:01 AM July 24, both fleets fleet may only take salmon in those waters in the Easterns District north of a line drawn from a point east of the Aniakchak River to the southernmost tip of Garden Is. to Cape Kunmik.
4-FS-L-23-05	10:00 AM 7/25/2005	9:00 AM 7/26/2005	**Opens** the Chignik Bay, and Central districts for 135 hours from 9:00 AM Tuesday, July 26 until 11:59 PM Sunday, July 31 for the cooperative fleet. **Closed Waters** Effective 9:00 AM July 26, the competitive fleet may only take salmon in those waters northeast of Mensis Point in the Chignik Bay District.
4-FS-L-24-05	11:30 AM 7/28/2005	12:01 AM 7/29/2005	**Opens** the Big River section in the Eastern District for 96 hours from 12:01 AM Friday, July 29 until 11:59 PM Monday, August 1 for both fleets. **Closed Waters** Effective 12:01 AM July 29 both fleets may only take salmon from the Big River section in the Eastern District.
4-FS-L-25-05	9:00 AM 8/3/2005	4:00 PM 8/4/2005	**Opens** the Chignik Bay, and Central districts for 32 hours from 4:00 PM Monday, August 1 until 11:59 PM Tuesday, August 2 for the competetitve fleet. **Closed Waters** Effective 4:00 PM August 1, the competitive fleet may only take salmon in those waters northeast of Mensis Point in the Chignik Bay District.
4-FS-L-26-05	12:00 PM 8/4/2005	5:00 PM 8/4/2005	**Opens** the Chignik Bay and Central districts for 24 hours from 5:00 PM Thursday, August 4, until 5:00 PM Friday, August 5 for the competitive fleet. **Closed Waters** Effective 5:00 PM August 4, the competitive fleet may only take salmon in those waters northeast of Humes Point in the Chignik Bay District.
4-FS-L-27-05	9:00 AM 8/5/2005	5:00 PM 8/5/2005	**Extends** the current commercial salmon fishing period for the competitive fleet in the Chignik Bay and Central districts for 24 hours from 5:00 PM Friday, August 5 until 5:00 PM Saturday, August 6.
4-FS-L-28-05	9:00 PM 8/5/2005	5:00 PM 8/6/2005	**Extends** the current commercial salmon fishing period for the competitive fleet in the Chignik Bay and Central districts for 7 hours from 5:00 PM Saturday, August 6 until 11:59 PM Saturday, August 6.
4-FS-L-29-05	1:15 PM 8/12/2005	12:01 AM 8/15/2005	**Opens** the Big River Section of the Eastern District for 24 hours from 12:01 AM Monday, August 15 until 11:59 PM Monday, August 15 for both fleets **Closed Waters** Effective 12:01 AM August 15 both fleets may only take salmon in the Big River Section of the Eastern District.

APPENDIX C. MEMORANDUM RECOMMENDING TARGETING THE LOWER BOUNDS OF THE CHIGNIK SOCKEYE SALMON ESCAPEMENT GOALS DURING THE 2005 SEASON

Appendix C1.-Memorandum recommending targeting the lower bounds of the Chignik sockeye salmon escapement goals during the 2005 season.

ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

MEMORANDUM

TO: Patti Nelson
Regional Finfish Research Supervisor
Division of Commercial Fisheries
Region IV – Kodiak
and
Jim McCullough
Regional Finfish Management Supervisor
Division of Commercial Fisheries
Region IV – Kodiak

DATE: April 11, 2005

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THRU: Mark Witteveen
Finfish Research Biologist
Division of Commercial Fisheries
Region IV – Kodiak
and
Kenneth Bouwens
Chignik Area Management Biologist
Division of Commercial Fisheries
Region IV – Kodiak

FROM: Heather Finkle
Finfish Research Biologist
Division of Commercial Fisheries
Region IV - Kodiak

SUBJECT: Chignik River Watershed Biological Escapement Goal Recommendation

The purpose of this memorandum is to discuss the current escapement goals to the Chignik River watershed in terms of the health of the sockeye salmon rearing habitat in Chignik and Black Lakes. This discussion is based on preliminary data from the Chignik Lakes Ecological Assessment Project, the Chignik Smolt Enumeration Project and recent Board of Fisheries (BOF) changes to management objectives.

Changes to the Chignik River watershed biological escapement goals (BEGs) and management objectives should be noted first. Through the 2004 field season, the early run (Black Lake) BEG was 350,000-400,000 and, the late run BEG was 200,000-250,000 with an additional September management objective of 25,000 fish. The November 2004 BOF meeting did not change the goal ranges. It did, however, reclassify the BEGs as sustainable escapement goals

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(SEGs) and added an additional 25,000 fish August management objective, yielding a total late run (Chignik Lake) escapement and management objective range of 250,000 to 300,000 sockeye salmon.

Respective to the past BEGs, total sockeye salmon escapement estimates have been in excess of the goal ranges for 12 of the past 13 years (1992 – 2004; Table 1). With the exception of 2004, the early run escapements have been closer to the established BEGs than the late run escapements. From 2002 to 2004, the lower end of the BEGs were targeted for both early and late runs. In 2002, regardless of this effort, the total late run escapement exceeded the upper end of the BEG by almost 100,000 sockeye salmon. In 2003 the early run escapement estimate barely exceeded the lower end of the BEG although the late run escapement exceeded the upper end of the BEG. In 2004, escapements for both runs fell within the lower end of their respective BEGs, however, the late run did not fulfill its September management objective of 25,000 fish. The cumulative sockeye salmon escapement to the Chignik River watershed in 2004 was the lowest that it has been since 1992.

Table 1. Sockeye salmon escapements in the Chignik River watershed from 1992 to 2004.

	Early-run Escapement	Late-Run Escapement[a]	Total Escapement[a]
Goal	350,000-400,000	225,000-275,000[a]	575,000-675,000[a]
Year			
1992	360,681	405,922	766,603
1993	364,261	333,116	697,377
1994	769,462	197,447	966,909
1995	366,163	373,757	739,920
1996	464,461	284,676	749,137
1997	396,667	378,951	775,618
1998	410,659	290,469	701,128
1999	457,429	258,537	715,966
2000	536,141	269,084	805,225
2001	744,013	392,905	1,136,918
2002	380,701	343,616	724,317
2003	350,004	334,119	684,123
2004	363,800	214,459	578,259

[a] Includes September 25,000 fish management objective.

Fluctuations in escapement and their subsequent smolt production can greatly affect juvenile fish life history strategies. Zooplankton are the forage base for juvenile sockeye salmon, and a high abundance of juvenile sockeye salmon, resulting from high escapement levels, can negatively impact the juvenile sockeye salmon food supply. The zooplankton community is a complex, dynamic web of different species that are susceptible to different grazing pressures. The abundance, species composition, and even size of the zooplankton can change via either bottom-up pressures such as nutrient limitations and phytoplankton species composition or from top-down pressures from extensive grazing (Kerfoot 1987; Kyle 1996). Preliminary limnology data collected in 2000 through 2004 indicated that the forage base has been overgrazed in both Black and Chignik Lakes (Finkle and Bouwens 2001; Bouwens and Finkle 2003; Finkle *in prep*). In the Chignik River watershed, top-down pressures appear to be regulating the zooplankton population as evidenced by:

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1) Zooplankton species composition: High grazing pressure on zooplankton can cause a shift in zooplankton abundance and species composition to fewer and less nutritional species of sockeye salmon forage (Kerfoot 1987; Koenings and Burkett 1987). This seems to have occurred in both Black and Chignik Lakes in 2000 through 2004 compared to data taken in 1991 (Kyle 1992). From 2000 to 2004, *Bosmina* and *Cyclops* predominated the zooplankton species composition in both lakes. Both of the dominant species are inefficient grazers on phytoplankton, and are poor transmitters of energy and nutrients through the food web. Although juvenile sockeye salmon do prey upon *Bosmina* and *Cyclops*, they are not preferred sockeye salmon forage. *Daphnia* are the preferred species, which were nearly absent in both lakes from 2000 through 2002, and 2004. However, *Daphnia* were more abundant in Chignik Lake in 1991 and 2003, which both followed years when total escapements for each run were closer to their BEGs. Although the dominant zooplankton species composition still varied in 2003, the increase in *Daphnia* abundance may also suggest that top-down pressures on the preferred juvenile sockeye salmon forage, and thus the zooplankton community, were reduced. Further, rotifers, a type of smaller zooplankton unavailable as juvenile sockeye salmon forage, have been very abundant in recent years. Rotifers, it should be noted, make energy and nutrients unavailable to sockeye salmon because they are not a prey item.

2) Zooplankton size: The size of individual zooplankton (especially *Bosmina*) can change in response to high grazing pressure. The mean size of the *Bosmina* in both lakes was very small and below the elective feeding size threshold of sockeye salmon in 2000 through 2004. The zooplankton were generally larger, by species, in 1991 (Kyle 1992).

3) Zooplankton Biomass: The average 2000 through 2004 weighted mean zooplankton biomass (regardless of species or size) in Chignik Lake was about 436 mg/m2. In 2001, the weighted mean biomass in Chignik Lake was very low (170 mg/m2). In 2004, zooplankton biomass was 467 mg/m2. For comparison, the weighted mean biomass of Chignik Lake in 1991 was 916 mg/m2. Edmundson and Mazumder (2001) suggested that juvenile sockeye salmon are starving when zooplankton biomass levels approach about 100 mg/m2 and that they are fully satiated at levels above 1,000 mg/m2. Despite the increase in zooplankton biomass from 2001 to 2004, the 2004 biomass level is still considered low.

4) Phytoplankton abundance: Phytoplankton is the forage of zooplankton. Chlorophyll *a* is used as an indicator of phytoplankton production as it is a necessary component of phytoplankton respiration. High chlorophyll-*a* levels and nutrient data indicated that the Chignik watershed was not limited by nutrient abundance from 2000 to 2004. Chlorophyll-*a* levels were extremely high in both lakes from 2000 to 2002 and in 2004. This indicates that a zooplankton community is unable to transfer the energy and nutrients from the phytoplankton to sockeye salmon, indicating a bottleneck through top-down limitations of zooplankton production (Bouwens and Finkle 2003). Therefore, based on chlorophyll-*a* levels, the primary production of the system was high, but it was not transferred up the food web to juvenile sockeye salmon. In 2003, chlorophyll-*a* levels were lower and comparable to other Alaska Peninsula lakes (Finkle *in prep*), which suggests that phytoplankton were more efficiently consumed by zooplankton. This may also suggest that grazing pressure was less in 2003 relative to more recent years (Finkle *in prep*). The high chlorophyll-*a* levels in 2004 suggest that zooplankton were overgrazed in both lakes.

5) Stomach content analysis: Preliminary juvenile sockeye salmon stomach content analysis from 2001 and 2002 suggested that prey items other than zooplankton have been a major portion of the diet of rearing sockeye salmon in Black Lake, Chignik River, and Chignik Lagoon. The alternative prey included insects and amphipods. These prey were relatively less important in 2002 (when there was a higher zooplankton abundance and biomass) than in 2001, indicating that they might be chosen secondarily if zooplankton are not available. Stomach content data were not collected in 2003 or 2004.

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6) Juvenile sockeye salmon catch data: Juvenile sockeye salmon were sampled in Black Lake, Black River, Chignik Lake, Chignik River, and Chignik Lagoon in 2000 through 2003. Juvenile sockeye salmon sampling was reduced to Black Lake, Chignik River, and Chignik Lagoon in 2004. These data are not yet fully analyzed, but preliminary analyses indicate that the majority of the young-of-the-year-juvenile sockeye salmon emigrate from Black Lake to Chignik Lake during July and August of each year. This has been consistent with findings of studies over 30 years ago by Parr (1972) and Narver (1966) and more recent work by Ruggerone (1994). Therefore, it appears that Chignik Lake is an important rearing area for both stocks. We were unable to derive juvenile sockeye salmon abundance estimates; thus, catch rates were used as an indicator of relative abundance. During years when juvenile sockeye salmon catch rates in Chignik Lake were high (especially 2001) zooplankton biomass was low. Further, the catch rates of juvenile sockeye salmon in Chignik River and Chignik Lagoon were higher than in Chignik Lake in 2001. This suggests that the juvenile sockeye salmon were forced to utilize alternative habitats when the zooplankton population was overtaxed.

Data from the Chignik smolt project (Bouwens and Newland 2003; Finkle and Newland *in prep)* also indicate that the number of juvenile sockeye salmon rearing in the freshwater ecosystem may have been too high. About 6.75 million smolt emigrated in 2003 and 8.66 million smolt emigrated in 2004. Compared to an average of about 20 million smolt per year from 1997 through 2002, these were two of the three lowest estimations of juvenile sockeye salmon outmigration from the watershed. The proportion of age 2. smolt in the emigration has dropped over the last few years. The smolt that would have emigrated in 2003 as age 2. smolt experienced very poor feeding conditions in 2001 and only slightly better conditions in 2002 in Chignik Lake. This is further evidenced by the lack of an age 3. component from 2002 and 2003 sample catches. Similar circumstances existed for age 2. smolt rearing in 2002 and 2003. The freshwater survival of juvenile sockeye salmon may have been low in recent years because of low food availability due to overgrazing.

Recent changes to late run management objectives must also be considered when targeting escapements for the Chignik sockeye salmon stocks. Considering the Chignik Lakes Ecological Assessment and Chignik Smolt Enumeration Project data and the increase in the late run management objectives, it is recommended that management staff target the low end of both the early run (350,000 fish) and late run (250,000) escapement objectives. The goal of reducing the number of sockeye salmon fry in both lakes was implemented from 2002 to 2004 to relieve the top-down pressure on the zooplankton population and subsequently this recommendation is expected to increase the overall ecological health of the system in terms of sockeye salmon production. This protocol is still relevant as Black Lake juvenile sockeye salmon, which rear and compete in Chignik Lake, can deplete the forage base shared by both stocks. The effects of the targeted lower escapement goal ranges in 2003 and 2004 will not be reflected in the Chignik Lakes Ecological Assessment data until the young-of-the-year sockeye salmon have reared in the watershed and in subsequent adult returns until 2008. Thus, it is recommended to continue targeting the lower ends of the Black and Chignik Lakes escapement objectives.

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APPENDIX D. COMMERCIAL SALMON FISHERY CATCH AND EFFORT, BY DAY, BY FLEET

Appendix D1.-Cooperative fleet commercial salmon fishing effort and catch (including home pack but not including the department's test fishery harvest), by day in the Chignik Management Area, 2005.

	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
6/1	Fishery closed													
6/2	Fishery closed													
6/3	Fishery closed													
6/4	Fishery closed													
6/5	5	8	0	0	5,895	35,131	0	0	0	0	0	0	5,895	35,131
6/6	9	23	1	11	22,116	134,986	0	0	0	0	0	0	22,117	134,997
6/7	12	23	1	9	20,844	126,156	0	0	0	0	0	0	20,845	126,165
6/8	16	30	0	0	24,920	151,727	0	0	0	0	0	0	24,920	151,727
6/9	19	40	0	0	33,981	215,778	0	0	0	0	0	0	33,981	215,778
6/10	Fishery open to the competitive fleet only													
6/11	Fishery open to the competitive fleet only													
6/12	19	48	2	29	43,136	281,611	0	0	0	0	0	0	43,138	281,640
6/13	23	48	3	49	52,182	352,248	0	0	0	0	0	0	52,185	352,297
6/14	24	61	0	0	73,934	480,488	0	0	0	0	0	0	73,934	480,488
6/15	17	27	2	48	26,944	165,655	0	0	0	0	0	0	26,946	165,703
6/16	Fishery open to the competitive fleet only													
6/17	18	34	6	97	21,031	130,097	0	0	35	222	14	90	21,086	130,506
6/18	22	39	2	48	20,366	125,489	0	0	0	0	0	0	20,368	125,537
6/19	21	42	9	140	23,449	152,271	0	0	13	84	4	29	23,475	152,524
6/20	21	48	6	96	39,346	259,221	0	0	84	571	31	208	39,467	260,096
6/21	20	33	28	528	21,891	135,825	0	0	34	213	3	23	21,956	136,589
6/22	12	16	6	138	12,102	80,619	0	0	5	35	3	22	12,116	80,814
6/23	5	10	2	57	6,267	41,141	0	0	15	100	0	0	6,284	41,298
6/24	Fishery open to the competitive fleet only													
6/25	Fishery open to the competitive fleet only													
6/26	Fishery closed													
6/27	Fishery closed													
6/28	5	21	9	185	6,805	39,969	0	0	30	177	3	18	6,847	40,349
6/29	9	27	156	3,304	9,097	57,493	0	0	92	588	4	27	9,349	61,412
6/30	18	57	207	3,251	13,165	84,742	0	0	485	3,132	16	108	13,873	91,233

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	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
7/1	17	54	143	3,600	11,261	74,756	3	19	668	4,562	31	208	12,106	83,145
7/2	9	19	339	3,636	8,187	52,349	1	6	313	1,570	385	2,487	9,225	60,048
7/3	4	15	4	73	4,361	27,773	1	8	122	612	12	90	4,500	28,556
7/4	7	14	70	1,563	4,313	26,427	0	0	118	588	9	67	4,510	28,645
7/5	Fishery open to the competitive fleet only													
7/6	16	35	96	2,124	7,495	47,982	5	28	394	2,094	68	502	8,058	52,730
7/7	14	19	90	1,913	7,525	49,261	0	0	127	637	10	72	7,752	51,883
7/8	7	36	124	2,499	8,461	56,095	4	28	414	2,072	29	212	9,032	60,906
7/9	8	30	98	2,132	7,505	52,140	0	0	286	1,092	8	59	7,897	55,423
7/10	18	51	116	2,546	21,024	140,776	0	0	1,110	3,888	55	413	22,305	147,623
7/11	16	35	132	2,963	14,392	98,955	0	0	550	1,931	9	70	15,083	103,919
7/12	10	15	41	958	9,308	64,595	0	0	377	1,320	9	71	9,735	66,944
7/13	17	45	183	4,179	27,769	198,689	0	0	478	1,674	62	463	28,492	205,005
7/14	16	32	90	1,804	27,650	184,349	2	12	1,487	5,205	32	245	29,261	191,615
7/15	11	11	27	727	3,657	24,954	0	0	442	1,549	4	31	4,130	27,261
7/16	Fishery open to the competitive fleet only													
7/17	4	4	0	0	1,622	10,671	0	0	48	169	0	0	1,670	10,840
7/18	11	33	180	4,280	30,434	211,909	0	0	2,148	7,519	67	494	32,829	224,202
7/19	18	30	93	2,337	17,731	121,050	0	0	1,455	5,090	19	143	19,298	128,620
7/20	16	19	6	131	8,884	60,133	0	0	1,036	3,622	26	186	9,952	64,072
7/21	6	28	17	373	12,727	81,591	15	91	2,336	8,175	24	181	15,119	90,411
7/22	6	20	18	399	11,148	70,104	6	34	3,233	11,317	87	656	14,492	82,510
7/23	5	14	19	397	10,436	66,255	0	0	2,161	7,563	120	757	12,736	74,972
7/24	9	12	17	328	11,198	72,541	0	0	1,446	5,062	87	580	12,748	78,511
7/25	Fishery open to the competitive fleet only													
7/26	11	23	1	28	4,417	27,760	0	0	2,008	7,028	82	617	6,508	35,433
7/27	11	25	25	500	5599	35,342	8	45	3,788	13,269	67	437	9,487	49,593
7/28	8	19	13	195	4,944	31,874	5	31	2,843	9,950	67	502	7,872	42,552
7/29	6	19	41	835	9,700	60,865	0	0	4,755	16,641	101	762	14,597	79,103
7/30	6	12	7	158	8,082	50,230	37	223	4,563	15,970	73	541	12,762	67,122
7/31	7	8	46	869	4,903	29,099	94	563	5,497	19,238	97	728	10,637	50,497

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	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
8/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/2	Fishery open to the competitive fleet only													
8/3	Fishery closed													
8/4	Fishery open to the competitive fleet only													
8/5	Fishery open to the competitive fleet only													
8/6	Fishery open to the competitive fleet only													
8/7	Fishery closed													
8/8	Fishery closed													
8/9	Fishery closed													
8/10	Fishery closed													
8/11	Fishery closed													
8/12	Fishery closed													
8/13	Fishery closed													
8/14	Fishery closed													
8/15	1	2	0	0	2	10	12	79	21	78	2	7	37	174
8/16	Fishery closed for season													
8/17	Fishery closed for season													
8/18	Fishery closed for season													
8/19	Fishery closed for season													
8/20	Fishery closed for season													
Total	590	1,314	2,476	49,537	782,206	5,079,182	193	1,167	45,017	164,607	1,720	12,106	831,612	5,306,599

Appendix D2.-Competitive fleet commercial salmon fishing effort and catch (including home pack but not including the department's test fishery harvest), by day in the Chignik Management Area, 2005.

	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
6/1	Fishery closed													
6/2	Fishery closed													
6/3	Fishery closed													
6/4	Fishery closed													
6/5	Fishery open to the cooperative fleet only													
6/6	Fishery open to the cooperative fleet only													
6/7	Fishery open to the cooperative fleet only													
6/8	Fishery open to the cooperative fleet only													
6/9	13	14	0	0	13,073	85,852	0	0	0	0	0	0	13,073	85,852
6/10	21	31	5	87	59,760	395,451	0	0	640	2,026	69	486	60,474	398,050
6/11	20	28	0	0	51,784	345,992	0	0	0	0	0	0	51,784	345,992
6/12	Fishery open to the cooperative fleet only													
6/13	Fishery open to the cooperative fleet only													
6/14	Fishery open to the cooperative fleet only													
6/15	18	19	12	220	29,870	198,428	0	0	2,177	5,445	69	494	32,128	204,587
6/16	21	32	24	407	53,527	348,207	0	0	1,578	3,208	92	649	55,221	352,471
6/17	Fishery open to the cooperative fleet only													
6/18	Fishery open to the cooperative fleet only													
6/19	Fishery open to the cooperative fleet only													
6/20	Fishery open to the cooperative fleet only													
6/21	Fishery open to the cooperative fleet only													
6/22	Fishery open to the cooperative fleet only													
6/23	Fishery open to the cooperative fleet only													
6/24	17	23	45	748	24,721	161,358	0	0	1,819	4,588	767	5,356	27,352	172,050
6/25	15	18	10	151	7,329	48,011	0	0	1,007	2,512	195	1,370	8,541	52,044
6/26	Fishery closed													
6/27	Fishery closed													
6/28	Fishery open to the cooperative fleet only													
6/29	Fishery open to the cooperative fleet only													
6/30	Fishery open to the cooperative fleet only													

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	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
7/1	Fishery open to the cooperative fleet only													
7/2	Fishery open to the cooperative fleet only													
7/3	Fishery open to the cooperative fleet only													
7/4	16	17	62	1,093	7,321	48,265	8	49	1,244	3,605	124	870	8,759	53,882
7/5	21	21	329	3,839	14,150	88,623	203	1,214	12,197	24,880	1,730	12,120	28,609	130,676
7/6	13	13	84	811	11,823	77,353	3,343	22,451	10,847	26,002	479	3,355	26,576	129,972
7/7	8	8	31	359	10,113	68,286	959	6,027	5,015	15,062	151	1,064	16,269	90,798
7/8	11	11	191	1,435	6,259	42,052	1,624	11,324	7,373	18,612	509	3,578	15,956	77,001
7/9	Fishery open to the cooperative fleet only													
7/10	Fishery open to the cooperative fleet only													
7/11	Fishery open to the cooperative fleet only													
7/12	Fishery open to the cooperative fleet only													
7/13	Fishery open to the cooperative fleet only													
7/14	Fishery open to the cooperative fleet only													
7/15	20	21	74	1,687	26,778	175,877	188	1,484	30,412	93,599	971	7,761	58,423	280,408
7/16	21	28	44	923	27,963	192,338	136	1,018	20,286	66,507	548	4,222	48,977	265,008
7/17	Fishery open to the cooperative fleet only													
7/18	Fishery open to the cooperative fleet only													
7/19	Fishery open to the cooperative fleet only													
7/20	Fishery open to the cooperative fleet only													
7/21	Fishery open to the cooperative fleet only													
7/22	Fishery open to the cooperative fleet only													
7/23	Fishery open to the cooperative fleet only													
7/24	Fishery open to the cooperative fleet only													
7/25	21	23	12	331	10,663	71,757	158	1,191	29,473	92,360	744	5,807	41,050	171,446
7/26	10	10	0	0	1,017	6,629	0	0	940	2,794	7	54	1,964	9,477
7/27	Fishery open to the cooperative fleet only													
7/28	Fishery open to the cooperative fleet only													
7/29	Fishery open to the cooperative fleet only													
7/30	Fishery open to the cooperative fleet only													
7/31	Fishery open to the cooperative fleet only													

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	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
Date	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
8/1	12	12	2	55	1,437	9,423	11	65	5,657	21,777	52	293	7,159	31,613
8/2	19	22	6	116	4,426	29,083	133	1,010	17,563	61,268	559	4,389	22,687	95,866
8/3	Fishery closed													
8/4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6	4	4	0	0	837	5,144	0	0	792	3,014	33	230	1,662	8,388
8/7	Fishery closed													
8/8	Fishery closed													
8/9	Fishery closed													
8/10	Fishery closed													
8/11	Fishery closed													
8/12	Fishery closed													
8/13	Fishery closed													
8/14	Fishery closed													
8/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16	Fishery closed for season													
8/17	Fishery closed for season													
8/18	Fishery closed for season													
8/19	Fishery closed for season													
8/20	Fishery closed for season													
Total	301	355	931	12,262	362,851	2,398,129	6,763	45,833	149,020	447,259	7,099	52,098	526,664	2,955,581